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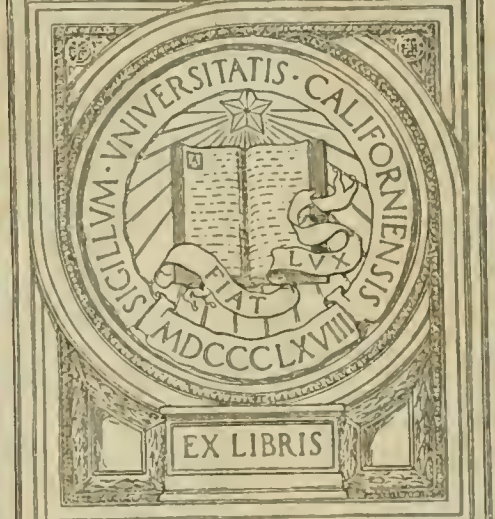

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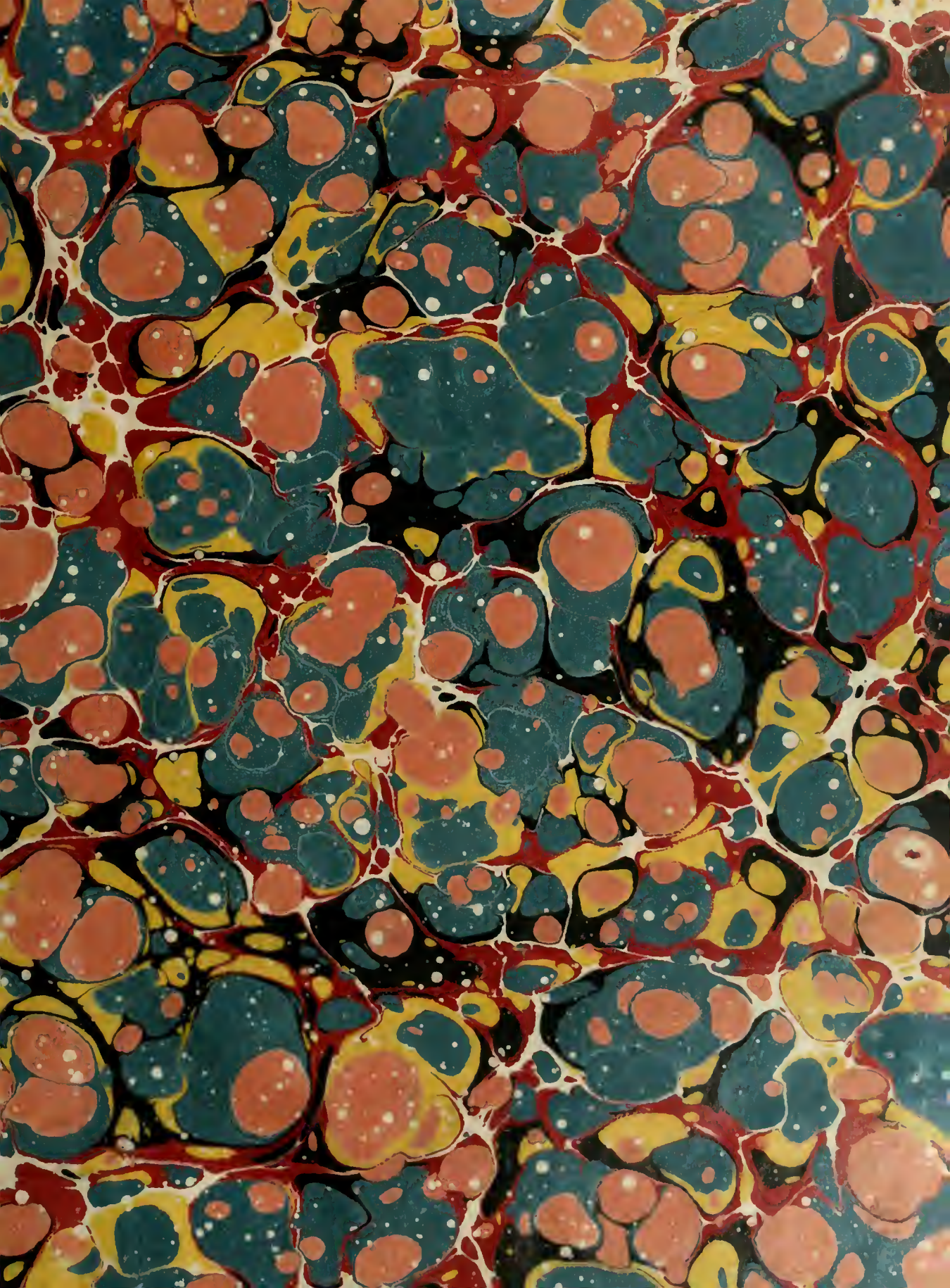

THE

NATURE OF THINGS:

A DIDACTIC POEM.

TRANSLATED FROM THE LATIN

OF

TITUS LUCRETIUS CARUS.

VOL. II.

Strahan and Preston,
Printers-Street.

Drawn by E. F. Burney

Engraved by I. G. Walker

Such songs they says the shepherd from the shade
Led on by Pan with pine leaved garland crowned
And seven mouthed reed his labouring lip beneath
Waking the woodland Muse with ceaseless song

Published as the Act directs by Longman, Hurst, Rees & Orme, Paternoster Row, Sept. 1808

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NATURE OF THINGS:

A DIDACTIC POEM.

TRANSLATED FROM THE LATIN

OF

TITUS LUCRETIUS CARUS,

ACCOMPANIED WITH THE ORIGINAL TEXT,

AND

ILLUSTRATED WITH NOTES PHILOLOGICAL AND EXPLANATORY.

By JOHN MASON GOOD.

IN TWO VOLUMES.

VOL. II.

LONDON:

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1805.

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THE

NATURE OF THINGS.

BOOK THE FOURTH.

ARGUMENT.

From the nature and properties of atoms, and the nature and properties of the soul, the Poet proceeds to illustrate the nature and origin of sense and perceptions, as well in sleep as in vigilance. The doctrine of images or emanations producing the sense of vision; mirages or atmospheric deceptions, and their origin; Epicurean theory of optics and catoptrics; plane mirrors, and their effects; convex mirrors; darkness produced by too large a flow of light; a variety of other optical and entertaining problems proposed and solved. The truth and certainty of the senses, and the fallacy of the mind in its judgment. Sound, or the doctrine of acoustics; the cause of echoes; origin of the mythologic tale of Pan, the satyrs, and the wood nymphs. Taste, or the doctrine of geumatics. Smell, or the doctrine of olfaction. Thought, and imagination; why we seem, at times, to perceive in our dreams the semblances of our deceased friends; why the semblances of other objects often strike us while musing upon them; why the mind thinks on what it chuses. The application of the senses to their respective and appropriate offices. Sleep, dreams, and their cause. Virility; the passion and economy of love; the necessity of restraining an undue indulgence in illicit amours; and the certain ruin of the voluptuary in his health, fortune, and reputation. The superior pleasures of virtuous affection. Doctrine of generation; sterility; fruitfulness. The importance of an amiable disposition to domestic felicity; and its triumph over every opposition.

DE RERUM NATURA.

LIBER QUARTUS.

AVIA Pieridum peragro loca, nullius ante
Trita solo: juvat integros accedere funteis,

Ver. 1. PIERIAN *paths I tread untrod before.*] The figure denominated by rhetoricians, *iteration*, or *anaphora*, may be divided into three kinds;—*literal*, or that in which the same letter is repeated, more frequently named alliteration; *verbal*, in which we meet with a purposed recurrence of the same word; and *periodic*, or that in which we trace a repetition of an entire passage or sentence. To each of these Lucretius appears to have been fondly attached; and especially to the last, of which we meet with an instance in the opening of the Book before us; the whole of the first twenty-two verses being a mere repetition, with scarcely any variation, of what occurs in Book I. v. 988—1009.

Upon the second division into which I have thus partitioned the anaphora, the iterative use of the same word, and the frequency of its adoption by other poets, I have offered some remarks, in the note on Book I. v. 877. Respecting both the first and third, I shall only therefore briefly remark, that no didactic poem affords such frequent examples of them as the present. Of the former, we meet with an instance not far from the beginning of the first Book, v. 272.

——venti vis verberat incita pontum.

In the very passage before us, v. 9, we meet with another:

Carmina, Musæo contingens cuncta lepore.

Of the latter, the examples are almost innumerable: and why this branch of the figure before us has not been as frequently employed in heroic or didactic versification as the two preceding, I am at a loss to determine. Judiciously introduced, it has a more prominent merit, and is, at all times, liable to less abuse than either of the other branches of the anaphora. Our poet, in the use he has made of it, seems to have been occasionally influenced by an idea of the intrinsic beauty of the passage itself, and, occasionally, by that of its argumentative importance, as containing a maxim or elucidation which the reader ought to keep perpetually stored in his mind. Of the former motive, I refer for instances, among many others that might be enumerated, to the passage now under consideration; to Book V. v. 117—120 of this version, which is a literal repetition of Book I. v. 796—799; and to Book IV. v. 185—188, which is also literally copied into the same Book v. 928—931. For proofs of the latter, the reader may compare Book I. v. 729—730, with the

THE NATURE OF THINGS.

BOOK THE FOURTH.

PIERIAN paths I tread untrod before.
Sweet are the springing founts with nectar new,

---

ame Book v. 856, 857; and Book III. 798—810, with Book V. 134—146.

In the Note on Book I. v. 877, I have offered a few instances of the adoption of the *verbal* anaphora in a variety of modern, as well as of ancient poems. A still freer use has been made, in every tongue, of the alliterative figure, or the *literal* anaphora; so free, indeed, among poetasters of our own days, as to have thrown an undue degree of obloquy on the figure itself. Yet, that it is by no means altogether unworthy of notice, we may collect from its casual adoption by Milton and Virgil: from the former of whom, I have introduced an instance in the above Note on Book I. v. 877; while, from the latter, I shall content myself with referring the reader to the following hemistich of the Georgics, iii. 9:

*V*ictorque, *v*irum *v*olitare per ora.

It is said, that, among modern writers, the Germans have shown little or no predilection for this playful figure; and yet there are few, even of their most classical poets, who will not furnish us with instances of it. I now, accidentally, open the Death of Abel, and in Book I. p. 67, read *in eurem schatten werd' ich wieder wandeln, wenn ich*, &c.

The Persian poets who, more than those of any other nation, are attached to both the other orders of the anaphora, afford, also, manifest proofs of a fondness for alliteration. There is no gazel of Hafiz better known than that which begins

رونق دهد شبابست دکر نستانرا

In the tenth beit or distich we meet with the following verse, which I shall transcribe in Roman characters, to render the force of the observation more general:

*M*ahi Kenani *m*in *m*usnedi *m*esr ani tori shood.

It is, perhaps, still less generally known, that the sacred writers have, at times, indulged in the same playfulness of figure: and yet the verse in Isaiah, xxiv. 17,

פחד ופחת ופח

Pachad u-pachath, pach,

in which the alliteration is obviously intended, as well as various other instances which might easily be adduced, if necessary, and especially ch. lvii. 6. sufficiently proves, that it was as common to the Hebrew poets as to those of other nations. Of all the sacred bards, however, Isaiah appears to have been most attached to the anaphora in all its different branches; and the chapter before us, without going

Atque haurire; juvatque novos decerpere flores,
Insignemque meo capiti petere inde coronam,
Unde prius nulli velarint tempora Musæ.
Primum, quod magnis doceo de rebus, et artis
Religionum animum nodis exsolvere pergo:
Deinde, quod obscurâ de re tam lucida pando
Carmina, Musæo contingens cuncta lepore:
Id quoque enim non ab nullâ ratione videtur;
Nam, velutei pueris absinthia tetra medentes
Quom dare conantur, prius oras, pocula circum,
Contingunt mellis dulci flavoque liquore,
Ut puerorum ætas improvida ludificetur
Labrorum tenus; interea perpotet amarum
Absinthii laticem, deceptaque non capiatur,
Sed potius, tali a tactu recreata, valescat:
Sic ego nunc, quoniam hæc ratio plerumque videtur

---

farther, will furnish us with instances of each. He adopts it with as much freedom and frequency among his own countrymen, as Hafiz among the Persians, or Anacreon among the Greeks.

I have admitted, that the *periodic* iteration has not been very generally exhibited in didactic or heroic poems. Yet Virgil is not without instances of it, both in his Georgics and his Æneid. Thus, in the latter, the distich, l. v. 149,

> *Consonat omne nemus*, vocemque inclusa volutant
> Littora, pulsati *colles* clamore *resultant*;

is repeated, or rather contracted into a single verse in l. viii. 305,

> Consonat omne nemus strepitu, collesque resultant:

while the examples in the Georgics are too numerous to require adverting to. We meet, also, with similar examples in the book of Proverbs, the oldest didactic or ethetical poem that has descended to us, and of merit altogether unrivalled in its kind. The lighter orders of poetry, however, of all nations, their pastorals, odes, and ballads, overflow with instances of the periodic iteration, generally forming a sort of burden or chorus to the common subject of the piece. The odes of Anacreon and Hafiz, the idyls of Theocritus and Bion, the eclogues of Virgil, and many of the best lyric compositions of the present day in all languages, as well as the ballads of the old English and Provençal minstrels, are replete with this rhetorical figure. But no poets, perhaps, have

Sweet the new flowers that bloom; but sweeter still
Those flowers to pluck, and weave a roseat wreath
The muses yet to mortals ne'er have deign'd.
With joy the subject I pursue, and free
The captive mind from Superstition's yoke:
With joy th' obscure illume; in liquid verse
Graceful and clear, depicting all survey'd:
By reason guided. For as oft, benign,
The sapient nurse, when anxious to enforce
On the pale boy the wormwood's bitter draught,
With luscious honey tints the goblet's edge,
Deceiving thus, while yet unus'd to guile,
His unsuspecting-lip, till deep he drinks,
And gathers vigour from the venial cheat;—
So I, since dull the subject, and the world

---

indulged in it with so much frequency, boldness, or success, as the Hebrew bards, and especially Isaiah and the royal psalmist. It is almost impossible to open the lyrical effusions of the latter, without falling upon instances. The beautiful and deeply plaintive elegies in Ps. xlii. and xliii. furnish us with repeated examples. The following from Ps. xxiv. is of a character altogether different, and admirably forcible and spirited:

7 שאו שערים ראשיכם
והנשאו פתחי עולם
ויבא מלך הכבוד:
8 מי זה מלך הכבוד:
יהוה עזוז וגבור
יהוה גבור מלחמה:
9 שאו שערים ראשיכם
ושאו פתחי עולם
ויבא מלך הכבוד:
10 מי הוא זה מלך הכבוד:
יהוה צבאות הוא
מלך הכבוד:

7 Ye gates! lift up your heads;
Lift ye up, ye everlasting doors!
That the King of Glory may come in.
8 "Who is this King of Glory?"
Jehovah, the strong and the mighty;
Jehovah, the valiant in battle.—
9 Ye gates! lift up your heads;
Lift ye up, ye everlasting doors!
That the King of Glory may come in.

Tristior esse, quibus non est tractata, retroque
Volgus abhorret ab hac; volui tibi suaviloquenti
Carmine Pierio rationem exponere nostram,
Et quasi Musæo dulci contingere melle;
Si tibi forte animum tali ratione tenere
Versibus in nostris possem, dum percipis omnem
Naturam rerum, ac persentis utilitatem.
Sed, quoniam docui cunctarum exordia rerum
Qualia sint, et quam, variis distantia formis,
Sponte suâ volitent, æterno percita motu;
Quoque modo possint res ex hiis quæque creari:
Atque, animi quoniam docui natura quid esset,
Et quibus e rebus cum corpore compta vigeret,
Quove modo distracta rediret in ordia prima:
Nunc agere incipiam tibi, quod vehementer ad has res

---

10 "Who is this King of Glory?"
Jehovah the God of hosts;
He is this King of Glory.

Ver. 18. ——*would fain, in honey'd phrase,*
Tun'd by the Muses, to thine ear recite] The following description by Sir Philip Sidney, of what a poet should be, is so perfectly in consonance with the present passage, and so truly beautiful in itself, that I cannot avoid copying it. "He doth not only show the way, but giveth so sweet a prospect into the way, as will entice any man to enter into it; nay, he doth, as if your journey should be through a fair vineyard, at the first give you a clustre of grapes, that, full of that taste, you may long to pass further. He beginneth not with obscure definitions, which must blurre the margent with interpretations, and load the memory with doubtfulness; but he cometh to you with words set in delightful proportion, either accompanied with, or prepared for the will-enchanting skill of music; and with a tale (forsooth) he cometh unto you,—with a tale which holdeth children from play, and old men from the chimney-corner."

With this aspiration of our poet, after soft, mellifluous numbers, may be contrasted the bold and

Abash'd, recoils; would fain, in honey'd phrase,
Tun'd by the muses, to thine ear recite
Its vast concerns; if haply I may hope
To fix thine audience, while the flowing verse
Unfolds the nature, and the use of things.

Since, then, our earlier strain the fact has prov'd
Of seeds primordial; how, in various forms,
Oft differing each from each, at will they roam,
Urg'd on by ceaseless motion,—prov'd the mode
Whence all existing, thence exists alone:
Since, too, the mind's deep nature we have trac'd,
Whence first it springs, with body how unites,
And how, when sever'd, to primordial seeds
Again it lapses;—haste we next t' unfold
Those forms minute, a theme connected close,

---

energetic invocation of Klopstock to the muse of Sion for numbers of a different description, on being about to paint the characters of the infernal spirits assembled, in Pandemonium, before the tremendous throne of the arch-apostate. The beauties of each, if I mistake not, are great and appropriate:

Die du mit ruh voll feuer und ernst zu der höll' hinabsiehst,
Weil du zugleich im angesicht gottes klarheit erblickest,
Und zufriedenheit über sich selbst, wenn er sünder bestrafet,
Zeige sie mir, Sionitinn, und lass die mächtige stimme
Rauschend, gleich sturmwinden, wie wetter gottes, ertönen. Messias, b. ii.

Thou, who, unshuddering, view'st th' abyss below,
View'st, with bright blaze th' Eternal's visage glow,
With sense of secret justice, when his arm
Shakes the bold sinner with severe alarm,
Come, maid of Sion! let the verse I pour,
Now, like the storm, like God's own thunders roar.

Adtinct, esse ea, quæ rerum simulacra vocamus ;
Quæ, quasi membranæ summo de corpore rerum
Dereptæ, volitant ultro, citroque, per auras ;
Atque eadem, nobis vigilantibus obvia, menteis
Terrificant, atque in somnis, quom sæpe figuras
Contuimur miras, simulacraque luce carentum ;
Quæ nos horrifice, languenteis sæpe sopore,

Ver. 33. ——IMAGES OF THINGS :] The poet is now entering upon the theory of external perception, as unfolded in the code of Epicurus ; and however justly this theory may have yielded to the more accurate and applicable doctrine of the moderns, it is, nevertheless, so analogous to many of the phænomena of nature, and, as will be found in the sequel of the book before us, so readily, and, in many instances, so satisfactorily explains the nature and powers of external objects, that it has ample merit and excellence enough to preserve it from oblivion : and, excepting in the two branches of optics and acoustics, is, for the most part, still adhered to by the different philosophers of the present day.

According to the theory of Epicurus, all the external senses are equally excited to action by the friction, upon their appropriate nerves, of some portion of the object perceived ; and which is perpetually, for this purpose, ejecting some fine and attenuate effluvium from its own body, into the surrounding atmosphere. Thus, we acquire the sensation of taste or smell by the friction of the sapid or olfacient particles of the substance smelt or tasted, upon the sapid or olfactory nerves. But the Epicureans, not satisfied with the application of this doctrine, of a perpetual effluvium to the senses of taste and smell, advanced considerably farther, and endeavoured to account for those of hearing and sight upon the same common principle. In consequence of which, they contended, that every one, in the act of speaking, protrudes into the air an attenuate effluvium from the fauces ; which, circulating in every direction, like the odorous particles of the rose, or any other perfume, reaches, at length, the auditory nerves of the by-standers, and excites the sensation of hearing : and from this effluvium, or perpetual loss of substance, in the act of speaking, they ingeniously accounted for that hoarseness and exulceration which frequently attend upon the delivery of a long harangue. The same principle was applied to the explication of vision : and, as the doctrine of optics is by far the most important branch of the wide theory of external perception, our poet commences with this subject, and expatiates upon it more largely than upon any of the collateral branches. The effluvium ejected from external objects is sometimes, he tells us, totally broken and disconnected, as in the case of odours ; at other times, connected, in some degree, although very loosely so, as in the instance of smoke or flame ; and, at other times again, perfectly continuous in its texture, although inconceivably delicate and rare, retaining, like the cast-off skin of the snake, a perfect image of the object from which it has been thrown, and, of course, exciting the optic nerve to a sense of its figure, as it at length impinges against the eye, through the medium of the air.

Term'd by the learned IMAGES OF THINGS:
Forms that, like pellicles, when once thrown off
Clear from the surface of whate'er exists,
Float unrestrain'd through ether. Fearful these
Oft through the day, when obvious to the sense,
But chief at midnight, when in dreams we view
Dire shapes and apparitions, from the light
Shut out for ever, and each languid limb
With horror gaunt convulsing in its sleep.

He maintains, that these floscules or pellicles of objects are perpetually emanating from all substances whatever; and that, as the permanence of smell proceeds only from the perpetual arrival of fresh particles of perfume within the region of the nostrils, so the permanence of sight is produced in the same manner, from the unfailing arrival of fresh images or pellicles of objects within the region of vision, and their perpetually striking upon, and exciting the optic nerve.

This ingenious, though incorrect theory of optics did not originate with Epicurus, but was received from the school of Democritus, although the former is reported to have added some considerable improvements to it, and to have raised it to its utmost point of reputation. Epicurus, as well as Democritus, denominated these films or floscules of bodies εἴδωλα, τύπους, and ὑμένας, "idols, images, and shades," indifferently. To which terms, Lucretius, for the sake of variety, has added the names of effigies, species, formæ, exuviæ, spolia, and cortices, or peelings.

It must be confest, that the ancient philosophers erred more with respect to the theory of optics, than with respect to any other subject of physical science that fell beneath their investigation: with catoptrics, they had but little comparative acquaintance; and dioptrics were totally unknown to them, as we may naturally conclude from the silence of Euclid upon this important branch. Numerous, therefore, as are the phænomena which refuse all explanation upon the Newtonian system, and still doubtful as are some few of its principles, it has an unquestionable superiority over the system of Epicurus: at the same time, there is an ingenuity, and an unity and simplicity of design in the latter, that considerably entitle it to our reverence, though they cannot command our assent. See farther on this subject, the Note on v. 221 of this Book.

Ver. 36. ——*Fearful these*
Oft through the day,——] To the same effect, the creative muse of Thomson:

Shook sudden from the bosom of the sky
A thousand shapes, or glide along the dusk,
Or stalk majestic on. Deep-rous'd I feel
A sacred terror, a severe delight
Creep through my mortal frame.

SEASONS, ii. 538.

Ver. 39. *Dire shapes and apparitions, from the light*
Shut out for ever,——] A description perfectly consentaneous occurs in B. i. 137; and as the reader will find, in the note subjoined to that verse, that Virgil has copied it from the original without the slightest alteration, he has only to turn to the Georgics, iv. 472. and he will find a similar copy of the verse now before us. In each of them it occurs thus:

——simulacraque luce carentum.

Excierunt : ne forte animas Acherunte reamur
Ecfugere, aut umbras inter vivos volitare ;
Neve aliquid nostri post mortem posse relinqui,
Quom corpus simul atque animi natura, perempta,
In sua discessum dederint primordia quæque.

Dico igitur, rerum ecfigias tenueisque figuras
Mittier ab rebus, summo de corpore, eorum
Quæ quasi membranæ, vel cortex nominitanda est,
Quod speciem ac formam similem gerit ejus imago,
Quoiusquomque cluet de corpore fusa vagari.
Id licet hinc quam vis hebeti cognoscere corde ;
Principio, quoniam mittunt in rebus apertis
Corpora res multæ, partim diffusa solutæ,
Robora ceu fumum mittunt, ignesque vaporem ;
Et partim contexta magis, condensaque, ut olim
Quom teretes ponunt tunicas æstate cicadæ,

Ver. 41. *With horror gaunt convulsing in its sleep.*] Consistently with the doctrine of the perpetual emanation of pellicles, or images, from every existing object, the poet supposes, that such kinds of images are incessantly thrown forth also from the corses of the dead after their interment. But so attenuate is the membrane ejected, that it passes with as much ease, and as little injury, through the surrounding coffin and superincumbent earth or marble, as the light passes through glass. In the day-time, we are generally prevented from noticing these floating forms, by the more forcible and direct assault of the images of bodies that immediately surround us, which attract our notice in a superior degree. Occasionally, however, when we are abstracted from the noise and bustle of the world, and immersed in solitude and quiet, the eye or the mind itself, to which the eye is only the avenue, becomes sensible of their presence : and, it was upon this principle, that Cassius accounted to Brutus, for the celebrated apparition that repeatedly stood before him in his tent, previous to the battle of Pharsalia. But in the silence of midnight and sleep, we are still more susceptible of their impulse. The eye, it is

For deem not thou the soul can e'er escape
From hell profound; that spectres of the dead
Can haunt the living; or that aught we feel
One hour survives when once the stroke of fate
Severs the mind from body, and remands
Each to th' appropriate atoms whence they sprang.
Hence hold we firm that effigies of things,
Fine, filmy floscules from the surface fly,
Like peels, or membranes, of whate'er exists;
The form precise, how wide soe'er diffus'd,
Maintaining still the parent body boasts.
This e'en the dull may learn; since sight itself
Marks the light film from many a substance urg'd,
Oft loosely floating, as the fume impure
From crackling faggots, or the brighter blaze
Of red, resplendent furnace; oft compact,
And firm of texture as the silken veil
Thrown from the grass-hopper, when summer wanes,

---

true, is, at this period closed, and all is darkness around us: but, for the very reason that the filmy emanation is capable of piercing through the coffin and sepulchre in which the corse is confined that ejects it, without injury—it is also capable of insinuating itself through all the pores of the body, till it reach and stimulate the very soul itself, without the exercise of its external organs of sense. And, from this phænomenon, our philosophic poet undertakes to develop the cause of dreams, of which he gives us a full theory in the sequel of the Book before us, as well as expatiates at large upon the fact which forms the subject of the present Note. See v. 738—1056.

Ver. 49. *Fine, filmy floscules from the surface fly,*] That this was the express doctrine of Epicurus we know, from what yet remains of his letters to Herodotus, as preserved by Diogenes Laertius, in lib. x. 46. Και μην και τυποι ὁμοιοσχημονες τοις στερεμνιοις εισι λεπτοτησιν απτεχοντες μακραν των ϕαινομενων.—

Ver. 59. *Thrown from the grass-hopper, when summer wanes,*] The zoology of Lucretius is

Et vitulei, quom membranas de corpore summo
Nascentes mittunt; et item quom lubrica serpens
Exuit in spinis vestem; nam sæpe videmus
Illorum spoliis vepreis volitantibus auctas.
Quæ quoniam fiunt, tenuis quoque debet imago
Ab rebus mitti, summo de corpore rerum.
Nam, quur illa cadant magis, ab rebusque recedant,
Quam quæ tenuia sunt, hiscundi est nulla potestas;
Præsertim, quom sint in summis corpora rebus

---

seldom to be questioned: no philosopher appears ever to have studied nature with a more enlarged or attentive eye than himself; and the very beautiful simile before us is a proof of the truth of this assertion. The cicada or grass-hopper, like all the other species of the gryllus, though existing but for a single season, being hatched in the spring, and dying at the close of the summer, immediately after the period in which the female has deposited her eggs, casts its skin in the same manner as the caterpillar, and deposits in the fields a membrane so accurately true to its entire shape, that it is often mistaken at first sight for the grass-hopper itself. Several of the translators of our poet have ignorantly questioned the fact here advanced: but they hence only prove themselves unworthy of commenting upon the natural history of the Roman bard. Mr. Wakefield has well observed, that the complexion of the whole passage sufficiently indicates, that his mind was impressed with Aristotle's description of the same fact. He is speaking of the snake: εκδυεται γαρ ὡς περ τα εμβρυα εκ των χοριων—ὁ δε τεττιγες,—περιῤῥαγεντος του κελυφους, εξερχονται: "it throws off its cuticle, as the fetus at its birth throws off the membrane that surrounds it:—the grass-hopper in like manner disengages itself from its involving tunic." See note on b. iii. 626. of this poem, where several of these phænomena have been already noticed.

Perhaps, of all the animal exfoliations we meet with, the silk-worm exhibits the most extraordinary. In less than thirty days from the hour of its being hatched, it casts its skin four times; about the 10th, 16th, 21st, and 27th day: and some days before the last change takes place, which metamorphoses it into an aurelia, it voids, with its excrement, the very tube which lines the inside of its stomach and intestines. The exfoliated pellicle retains so entirely the figure of the caterpillar in its head, teeth, legs, colour, and hair, that, like the cast-off membrane of the grass-hopper, it is also often mistaken for the insect itself. The other species of caterpillars, with which we are acquainted, discharge their cuticles only twice or thrice, while in their worm-stage of existence.

The cicada, or grass-hopper, is said by some Italian writers, to possess a loud and shrill accent during the intensity of summer. Thus Sanazaro: "Per gli ombrosi rami le argute cicale cantando si affatica vano sotto al gran caldo." And hence Virgil, who had probably been a witness, in the same country, to the same fact:

Et cantu querulæ rumpent arbusta cicadæ.
Georg. iii.

And the loud woods with shrill cicadas ring.
Sotheby.

The ode xliii. of Anacreon is entirely devoted to the melodious chirping of this insect; and, in the

By many a month worn out; or that the calf
Casts on his birth-day; or the spotted robe
Rent from the snake, that trembles on the briar,
The briar full oft with spoils like these bedeckt.
Since these exist, then, floscules rarer still
May, too, be exiled from the face of things:
For why the grosser, palpable to sight,
Should rather thus exfoliate, than the flake
Of finer texture that all sight eludes

Anthologia is an epigram of Antipater, of which the following is the first couplet:

Αρκει τεττιγας μεθυσκει δροσος, αλλα τιοντες
Αειδειν κυκνων εισι γεγωνοτεροι.

In dew, that drops from morning's wings,
The gay cicada sipping floats;
And drunk with dew his matin sings,
Sweeter than any cygnet's notes.

And thus Gessner in his idyl, entitled Mycan, equally attentive, with our own poet, to the season of the close of the summer: und die grille und die heuschreke zwitscherten unter dem schatten der blätter im gesengeten grase. "And the cricket and the grass-hopper were chirping in the parched grass, beneath the umbrageous foliage."

On the natural language of different animals, see Note on Book VI. v. 1076.

Ver. 60. ——*or that the calf*
Casts on his birth-day;—] The membrane here particularly referred to is the alantois, formed for the purpose of containing the urine of the fetus prior to its birth, which is conveyed to it by an express vessel, denominated by anatomists, the urachus. The human fetus is not supposed to discharge its urine, but to retain it in the bladder till birth, which is hence, at that period, generally found full and distended. On this account, it has neither urachus nor alantois; its involucrum is simple and undivided, and is filled with the fluid denominated the amnios alone, which, by its light and equable pressure, admirably defends it from the chance of external accidents: and, perhaps, supplies it with nutriment, as the placenta does with oxygen and caloric.

It is curious to observe how carelessly, as well as erroneously, Creech has translated this passage,

Et vitulei, quorum membranas de corpore summo
Nascentes mittunt:

The heifers cast the *membranes of their horns.*

Ver. 61. ——*the spotted robe*
Rent from the snake,——] On this phænomenon I have already commented in the note on Book III. v. 626. Virgil has described the same fact more at large in the following verses:

—positis novus exuviis, nitidusque juventâ
Volvitur, aut catulos tectis, aut ova relinquens
Arduus ad solem, et linguis micat ore trisulcis.
GEORG. iii. 437.

—he, renew'd in all the speckled pride
Of pompous youth, has cast his slough aside;
And in his summer livery rolls along
Erect, and brandishing his forky tongue.
DRYDEN.

Multa minuta, jaci quæ possint ordine eorum,
Quo fuerint, et formaï servare figuram ;
Et multo citius quanto minus indupediri
Pauca queunt, et sunt in primâ fronte locata.
Nam certe jacere, ac perciri, multa videmus ;
Non solum ex alto penitusque, ut diximus ante,
Verum de summis ipsum quoque sæpe colorem :
Et volgo faciunt id lutea russaque vela,
Et ferrugina, quom, magnis intenta theatris,
Per malos volgata trabesque, trementia fluctant.
Namque ibi concessum caveaï subter, et omnem
Scenalem speciem, patrum, matrumque, deorumque,
Inficiunt, coguntque suo fluitare colore :

Ver. 79. ——*the tint*
Of steel cerulean,——] In the original, v. 73 :
——vela,
Et ferrugina,——

No metal, excepting copper, exhibits, in its chemical combinations with different substances, such a diversity of hues as iron. But the colour here manifestly alluded to, is the beautiful violet of burnt and polished steel. On this account, Virgil has bestowed the same epithet on the hyacinth :

——et ferrugineos hyacinthos. Georg. ii. 4.

With the Mantuan bard, indeed, it appears to have been a favourite term ; it occurs repeatedly in the Æneid ; and in Georg. i. 467. he employs it to explain the bloody purple in which the sun exhibited himself when he deplored the fall of Cæsar :

——caput obscurâ nitidum ferrugine texit.

——in *iron clouds* he veiled his light.

I give the translation of Mr. Sotheby, which, in the present instance, does not appear to possess his usual accuracy and felicity : for I much question whether the term *iron*, in the use before us, be calculated to convey to the English reader the idea of the Roman bard as relating to colour rather than to harshness or severity of substance. The verse in the original, moreover, as it appears to me, is meant to describe the sun as labouring under an eclipse, as cloathed in a " bloody iron hue," as it might faithfully be translated, rather than as veiled by clouds of a ferruginous tincture. Certainly, no such term as *clouds* occurs in the Latin text.

Ver. 80. —— *from their fluted heights*
Wave tremulous ;——] The original is highly beautiful, ver. 75.

The mind discerns not; for such viewless flakes
Live, doubtless, o'er each surface loose diffus'd,
Rang'd ever equal, and with ampler ease
Dispell'd, since gender'd of a lighter frame,
And in the front of objects fixt supreme.
For sight not merely bodies marks minute
Thrown from th' interior, or the base profound,
As prov'd already, but, like rain-bow hues,
Pour'd from the surface. This the crowd surveys
Oft in the theatre, whose curtains broad,
Bedeck'd with crimson, yellow, or the tint
Of steel cerulean, from their fluted heights
Wave tremulous; and, o'er the scene beneath,
Each marble statue, and the rising rows
Of rank and beauty, fling their tint superb.

Per malos volgata trabesque, *trementia fluctant*.

The older theatres among the Romans were open at the top to admit the introduction of light and refreshing air: and to screen the audience from the heat of the sun, the ingenuity of future artists at length furnished them with curtains, which were drawn partially or completely over at pleasure; an accommodation which, as we learn from Pliny, lib. xxiii. was first introduced by Quintus Catulus, on the dedication of the capitol. These earliest curtains were of simple, unornamented woof, and merely resorted to for their umbrage; but elegance was gradually combined with utility, till at length, during the Apollinarian games, Lentulus Spinter established the luxurious fashion of carbasina vela, or silky hangings, of the most glossy texture, and splendid hues. On the construction of the ancient theatre, see Note on ver. 1239. of the present Book.

To this tremulous drapery of the theatre, Propertius alludes in his Elegies, lib. ii.:

Nec sinuosa cavo pendebant vela theatro:

Nor o'er the concave theatre was hung
The folding curtains.

And Lucretius himself, more fully still, in Book vi. 111. where he compares the crash emitted by contending and opposite clouds to their crackling beneath the breeze.

The term *fluctant* in our common editions is written *fluant*, in opposition to the best authorities, and with far less energy of diction. Marchetti was of the same opinion, but he has unfortunately omitted the epithet *trementia*, "tremulous;" for the participle sventolando can scarcely be said to supply its intention:

——sventolando in sull' antenne
Ondeggian fra le travi, &c.

Et, quanto circum mage sunt inclusa theatri
Mœnia, tam magis hæc intus, perfusa lepore,
Omnia conrident, conreptâ luce diei.
Ergo lintea, de summo quom corpore fucum
Mittunt, ecfigias quoque debent mittere tenueis
Res quæque; ex summo quoniam jaculantur utræque.
Sunt igitur jam formarum vestigia certa,
Quæ volgo volitant, subtili prædita filo,
Nec singillatim possunt secreta videri.

Præterea, omnis odos, fumus, vapor, atque aliæ res
Consimiles, ideo diffusæ rebus abundant,
Ex alto, quia, dum veniunt extrinsecus, ortæ,
Scinduntur per iter flexum; nec recta viarum
Ostia sunt, quâ contendunt exire coorta.
At contra, tenuis summi membrana coloris
Quom jacitur, nihil est, quod eam discerpere possit;
In promptu quoniam est, in primâ fronte locata.
Postremo, speculis, in aquâ, splendoreque in omni,
Quæquomque adparent nobis simulacra, necesse est,

Ver. 85. ——*every object round*
Laughs with a deeper dye,——] Our poet has already frequently indulged himself in the same audacity of metaphor. See Note on B. i. 8. and B. ii. 505; and, as I have already observed, he has often been imitated with no inconsiderable success by the best poets of most nations in modern Europe; but those of Spain appear to have copied him more frequently than the bards of any other tongue. I have already given an example or two from Lope de la Vega. In Garcilaso de la Vega, the same imagery occurs still more frequently; and in Francisco de Borja, we meet with the following, in an elegant sonnet to The Rose:

While as the walls, with ampler shade repel
The garish noon-beam, every object round
Laughs with a deeper dye, and wears profuse
A lovelier lustre, ravish'd from the day.
As then the trembling drapery ejects
Hues from its surface, superficial too
From every substance effigies minute
Must stream perpetual, each alike discharg'd.
And hence from all things vestiges there are
Of subtlest texture hov'ring through the void,
All sight evading when but simply pour'd.
Each essence, vapour, fume, or aught alike
Attenuate, hence alone flows void of form,
That, gender'd deep within, through tortuous paths
Loose, and disjoin'd, it struggles to the day;
While the light quintescence of utmost hues
Streams unobstructed as supremely plac'd.

The main, moreo'er, the mirror, or aught else
Of polish'd front, each object full reflects

Detente, aguarda, presumida rosa,
Y en la piedad de Mayo no confies;
Porque essas hojas, *donde aora ries*,
En el seran tu perdicion hermosa.

Vain-glorious Rose, thy boasts forbear;
Trust not May, though heavenly fair.
Now laugh amid thy leaves—but know
Thy beauteous ruin thence shall flow.

Marchetti, with his accustomed taste, has preserved the full spirit of the original:

Di grazia, e di lepor *ridon* le cose.

Quandoquidem simili specie sunt prædita rerum,
Esse in imaginibus missis consistere eorum.
Nam, quur illa cadant magis, ab rebusque recedant,
Corpora, res multæ quæ mittunt corpore aperto,
Quam quæ tenuia sunt, hiscundi est nulla potestas.
Sunt igitur tenues formarum, dissimilesque,
Ecfigies, singillatim quas cernere nemo
Quom possit, tamen, adsiduo crebroque repulsu
Rejectæ, reddunt speculorum ex æquore visum:
Nec ratione aliâ servari posse videntur
Tanto opere, ut similes reddantur quoique figuræ.

Nunc age, quam tenui naturâ constet imago,
Percipe; et in primis, quoniam primordia tantum
Sunt infra nostros sensus, tantoque minora,
Quam quæ primum oculei cœptant non posse tueri.
Nunc tamen, id quoque utei conformem, exordia rerum
Cunctarum quam sint subtilia, percipe paucis.
Primum, animalia sunt jam partim tantula, ut horum
Tertia pars nullâ possit ratione videri.
Horum intestinum quod vis quale esse putandum est?
Quid cordis globus, aut oculi? quid membra? quid artus?

Ver. 105. ——*yet why the gross*
Should rather thus exfoliate than the flake——] We here meet with another instance of the periodic anaphora commented upon in the Note on v. 1. of the present Book. The verses before us are copied from v. 66—67, a few pages above.

Lambinus has illustrated this assertion of our poet by a passage to the same effect of Epicurus himself, as pre-

With perfect semblance. Whence this semblance fair
But from supernal images expell'd?
These, as more gross, we mark; yet why the gross
Should rather thus exfoliate than the flake
Of subtler texture, reason ne'er can prove.
Hence effigies there are from all things pour'd
Of nice resemblance, and the fairest web;
Which, though, when single, from the sight conceal'd,
When close reflected in perpetual stream
From the clear mirror, obvious meet the view.
Nor can the sophist other cause adduce
Whence springs the picture so correctly just.

Come, now, and mark with what attenuate frame
Such pictures live. This the prime seeds of things
So fugitive to sense, so less than aught
The keenest sight can pierce, perchance may prove.
How subtle these, then, thus the muse explains.

First, there are insects so minute, the view
Not half their puny members can discern.
What here are organs? what intestines here?
The globule what that forms their heart or eye?

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served in Diogenes Laertius, X. 47. Χρησιμον δη καιτουτο κατασχειν· πῶ, οτι τα ειδωλα ταις λεπτοτησιν αναπτρόλητοις, &c. "Adhere to this, as one of the first axioms of philosophy: nor is there any one fact in nature to controvert the existence of images of indescribable tenuity."

Ver. 123. *The globule what that forms their heart or eye?*] In the original:

Quid cordis globus, aut oculi?——

I have endeavoured to adhere with fidelity to the

Quantula sunt? quid præterea, primordia quæque,
Unde anima, atque animi constet natura necessum est,
Nonne vides, quam sint subtilia, quamque minuta?.
Præterea, quæquomque suo de corpore odorem
Exspirant acrem, panaces, absinthia tetra,
Abrotoneique graves, et tristia centaurea:
Quorum unum quid vis leviter si forte movebis,
Quin potius noscas rerum simulacra vagare
Multa modis multis, nullâ vi, cassaque sensu:
[Quorum quantula pars sit imago, dicere nemo est
Qui possit, neque eam rationem reddere dictis.]

Sed, ne forte putes ea demum sola vagari,
Quæquomque ab rebus rerum simulacra recedunt;
Sunt etiam, quæ sponte suâ gignuntur, et ipsa
Constituuntur in hoc cœlo, qui dicitur aër:
Ut nubes facere interdum, quom crescere in altum

---

spirit of the Latin. In the Italian version, we meet with nearly an equal desire:

— quale
Del core il globo, e gli occhi?

This appeal to the curiosities of entomology is peculiarly pertinent and beautiful, although the author was never in possession of the microscope of Lewenhoeck or Spallanzani; but in the present day, and particularly since the delicate discoveries of the latter philosopher, there is a double degree of force attached to the passage. For some account of the indefatigable labours of this profound zoologist, I refer the reader to the Note on Book ii. 878. of this poem. Those who would perfect themselves in the minute anatomy of insects, cannot consult a more valuable book than the Dinamica Animale degl' Insetti of M. Comparetti, lately published at Padua. They will here learn, that the heart in animals of this class differs considerably in its structure from that of other animals.

Ver. 130. *Fam'd for all cures, term'd all-heal by the crowd,*] In the original *panaces*; which is only a Greek synonym for the English here made use of. The panaces, panax, or all-heal, is an umbilliferous plant of the Linnéan class pentandria, and order digynia. The medical reputation which it possessed in the epoch of Lucretius, and which is confirmed by the writings of Pliny and Columellus, is now totally

Their tiny limbs? their tendons? but o'er all
What the nice atoms whence the soul proceeds?
Each part so subtile, so minute the whole.—
Next, each wild herb that from its branches pours
Ungrateful odours, southernwood severe,
The rueful wormwood, centaury, or that
Fam'd for all cures, term'd all-heal by the crowd,
These, by the lightest finger brush'd, emit
Myriads of effigies in various modes,
Void of all strength, wide hovering unperceiv'd.
Such who can calculate? what powers of mind
Scan their light textures, or their woof unfold?
Yet deem not thou such images alone
From things themselves emane; spontaneous, too,
Spring they in heaven above, combining strange,
Borne through th' aërial realms in modes diverse,
Their forms for ever shifting, till at length

lost. But it maintained some portion of its character as late as the end of the seventeenth century, and is still celebrated for its virtues in the herbals of Gerrard and Parkinson. The rest are well known.

Ver. 134. *Such who can calculate? what powers of mind*
Scan their light textures, or their woof unfold?] The distich in the original, which these two verses are designed to express, lies under the imputation of being spurious and surreptitious. Mr. Wakefield has been able to trace the passage in only a single codex, and that the Bolognian of Pius. In consequence of its appearing there, he has retained it, but has inclosed it in brackets. It is also retained in the English version of Creech, as well as the French of Des Coutures, and the Italian of Marchetti.

Ver. 140. *Their forms for ever shifting, till at length*
Nought lives on earth the phantoms never ape.] Hence Marchetti, paraphrasing, rather than translating:

E novi *Protei* in qualsivoglia forma
Cangian se stesse.

The passage will readily remind many of my readers of Mr. Cowper's description of the whimsical effects of frost at a water-fall:

Cernimus, et mundi speciem violare serenam; 135
(Quæ, multis formata modis, sublime feruntur,
Nec speciem mutare suam liquentia cessant)
Et quoiusque modi formarum vortere in oras,
Aëra mulcentes motu: nam sæpe gigantum

Here grotto within grotto safe defies
The sun-beam: there imbossed and fretted wild,
The growing wonder takes a thousand shapes
Capricious, in which Fancy seeks in vain
The likeness of some object seen before.

Task, V.

Ver. 142. ——*th' aerial vault serene*
Shadowing with moisture, grateful as it moves:] There is some degree of uncertainty in the position of these, and several of the adjoining verses, their relative situation differing in different editions. In a translation, however, this is not a matter of essential consequence, the general sense remaining the same in every position. The verses now quoted are in the original highly beautiful:

Cernimus et mundi speciem violare serenam:
Aëra mulcentes motu.

But many of the editors of our poet have not been satisfied with this elegant and picturesque delineation, and have spoiled it by their crude and tasteless emendations. Giffanius, for "aëra mulcentes," *refreshing the air*, has introduced aëra mulgentes "impelling or agitating the air;" and Faber, although he retains *mulcentes* in his text, has appended the following note: "the celebrated Simon Bosius, to whom we are indebted for a corrected edition of the Epistles to Atticus, approved the term *mulcantes, assaulting*; and most judiciously, if I have any comprehension at all." Simeo Bosius, vir clarissimus cui emendationem Epistolarum ad Atticum debemus, legi probabat *mulcantes*, optime si quid sapio. Des Coutures, in his Latin text, has followed the alteration of Giffanius, and in his French version thus translates the passage: "on les voit incontinent se grossir et *troubler par leurs mouvemens* impetueux la face riante de l'univers." Mr. Wakefield, with his accustomed taste, has rejected these depraved variations, and presented Lucretius in his native excellence. Marchetti, in his version, has done the same:

——e la serena
Faccia turbar del mondo, e'l cielo intanto
Lenir co'l moto.

The English translation of Creech is so extremely vague, that it has no corresponding term of any kind: but Guernier has injudiciously adopted the idea of Faber, in his English interpretation, while, in direct opposition to it, he retains the term *mulcenteis* in his Latin text, "we see the clouds sometimes thicken in the sky, darkening the serene face of the heavens, and *wounding the air by the violence of their motion.*"

The entire passage, in its true reading, is so extremely consentaneous with a description I have lately met with of the same subject in Dr. Booker's Hopgarden, a didactic poem of no small merit, that I shall take the liberty of transcribing it:

Hills, woods, and forests, shadowy vales, and plains,
Capacious bays, and promontories huge,
Fring'd with soft tufted foliage, Fancy sees
In those aërial forms *which richly veil*
The blue expanse of heaven.

In Thomson's beautiful invocation to the Spring, he has caught the very spirit of the verse in question; and has embodied it in colours that glow with all the tone of the Oriental pencil:

Come, gentle Spring! *etherial mildness*, come:
And from the bosom of yon *dropping cloud,*
——*veiled in a shower*
Of *shadowing roses* on our plains descend.

Nought lives on earth the phantoms never ape.
Hence clouds concrete, th' aerial vault serene
Shadowing with moisture, grateful as it moves:
Hence, shapes gigantic spread, protruding broad
Their interposing features; mountains hence,

Ver. 144. *Hence, shapes gigantic spread, protruding broad*

Their interposing features;——] These monstrous appearances in the atmosphere are not equally common to all countries, but depend in a great measure upon local causes and combinations. According to Pliny, the regions of Scythia within Imaus, and, according to Pomponius Mela, those of Mauritania behind mount Atlas, are peculiarly subject to them; and they are generally regarded by the barbarous inhabitants of such countries as spectres, or aerial demons. Of such grotesque phænomena, Diodorus Siculus makes particular mention in the fiftieth section of his third book, and points out the regions of Africa situate between the Syrtes and Cyrene, as the theatre of their most extraordinary appearance: περι γαρ τινας καιρους, says he, και μαλιστα κατα τας νηνιμιας, συστασεις ὁρωνται κατα τον αερα, παντοιων ΖΩΩΝ ἰδιας εμφαινουσαι· τουτων δ', αἱ μεν ἠρεμουσιν, αι δε κινησιν λαμβανουσι· και ποτε μεν ὑποφευγουσι, ποτε δε διωκουσι. "Even in the serenest weather there are sometimes seen in the air certain condensed exhalations, that represent the figures of all kinds of animals; occasionally, they seem to be motionless, and in perfect quietude; and occasionally to be flying; while, immediately afterwards, they themselves appear to be the pursuers, and to make other objects fly before them." This phænomenon is, in reality, seldom observed, except in serene weather; and it should seem, upon every theory yet offered to account for it, from the ingenious explanation of our own poet to that of M. Monge in the Memoirs relative to Egypt, that such an atmosphere is nearly or altogether necessary to its existence. The illusion has been noticed as frequently by modern as by ancient observers; and M. Crantz, in his History of Greenland, Vol. I. 49. has given a picture of it not essentially differing from the above just quoted from Diodorus Siculus. It is not confined to any particular part of the globe, but generally makes its appearance on the coast; the atmosphere, as I have already observed, being commonly clear and tranquil, and the phænomenon usually succeeded by a fall of rain. Our own sailors, from its more general appearance, call it a fog-bank; by many writers, it is denominated *fata Morgana*, and by the French, *mirage*.

For this atmospheric delusion, various causes have been assigned, and especially by Kircher, Scholt, and Gaspard Monge, who accompanied Bonaparte in his Egyptian expedition as one of the French Sçavans, and was a member of the Institute at Cairo: yet no explanation I have hitherto met with, has been given in satisfactory, or at least in popular language.

To illustrate it as clearly as may be, it is necessary, first of all, to call the reader's attention to the variable state of the atmosphere, which is commonly of an homogeneous, or equable tenuity, and consequently suffers the rays of the sun to permeate it without any obstruction or change; but at times is irregular, and compused of parts or bodies of a denser medium than its general texture and constitution: in which case the fluent ray, if it do not enter the denser medium in a direct or perpendicular line, will be either reflected, or refracted, or both, and the object surveyed through it assume a new, and not unfrequently a grotesque appearance.

There are various causes that produce such irregularities in the tenour of the atmospheric fluid; of which, perhaps, the most common is the descent of rain, whose globules, when opposed to the sun or the moon, at their rising or setting, in a clear sky, are well known to exhibit the phænomenon of the

Ora volare videntur, et umbram ducere late : 140
Interdum magnei montes, avolsaque saxa,

rain-bow : a phænomenon which depends upon the very principle now adverted to, and proceeds, indeed, from a double reflection and refraction, or, in other words, from the globule which produces the arch being converted into a double mirror, and a double prism. In the formation of this beautiful meteor, it is necessary to observe, that the ray which issues from the centre of the sun, and does not immediately, or perpendicularly, pass through the centre of the opposed globule of rain, must, upon the common principles of dioptrics, in consequence of its entering a transparent body of a different medium from the atmosphere itself, in a certain degree, be bent, deflected, or refracted from the right line in which it was proceeding ; and hence, instead of passing out at the posterior part of the globule immediately opposite to that at which it entered, it will be driven towards another limb, or marginal portion of the globule, and form an angular line co-equal to the obliquity with which it deviates from a right line on its entrance into the globule ; just as a stake, or the oar of a boat plunged obliquely into a river, appears to be broken or deflected from the point at which it enters the water. At this point, the refracted ray, instead of passing out of the globule, suffers another deflection, but from a very different cause : for the ray of light having been thrown across a certain portion of the posterior chamber of the globule of rain, without permeating it, all behind its passage becomes necessarily a dark shade, while the globule itself forms an anterior and polished surface to it ; whence a regular mirror is produced, and the ray is now reflected or thrown back from it, in the same manner as an incident ray of light, or image, is reflected or thrown back from a looking-glass, or a deep and clear stream of water, both of which, like the globule thus situated, consist of nothing more than a dark shadow with a polished surface : the obliquity of its path, in the present instance, being precisely similar to that which it has previously suffered from refraction ; the angular line of reflection being always co-equal with the angular line of incidence. It is hence obvious, that the ray, or fascicle of parallel rays, which entered obliquely below the centre of the globule, opposed to the centre of the sun, must be reflected obliquely above it ; and as the same process necessarily takes place, but in an inversed order, with the antagonist ray, or fascicle of parallel rays that entered with the same degree of obliquity above it, it is also obvious that, from this double refracting and reflecting power of an individual globule of rain, situated as above described, an angle of light must be formed, from their antagonism alone, exhibiting the different colours of which they consist in a definite order, according to the degree of their refrangibility : that the spread or hypoteneuse of the angle must depend upon the diameter of the globule which produces it ; and that its point being softened or obtunded to the eye by the distance through which it is beheld, agreeably to an observation of our poet in v. 375. of the present Book, the angle must be converted into an arch. And, hence, a beautiful and variegated rain-bow must necessarily result from a few rays of light acted upon by a single globule of rain, situated as above, from the fact alone of its possessing the power of a binary mirror or prism.

But a globule of rain is not the only substance in the atmosphere capable, at times, of producing the same effect ; nor, since we are told that the mirage usually occurs when the sky is peculiarly tranquil and serene, could it be the cause of this last equally curious phænomenon. Our time, however, has not been lost in thus hastily investigating the theory of the iris ; for the same principles will apply to the meteor before us. We are informed, not only that the mirage is chiefly to be noticed when the sky is clear and unclouded, but in the morning, and principally upon the coasts or banks of a large river. The mirage beheld by M. Crantz was on the shore of the Kookoernan islands near the Cape of Good Hope ; it has often been traced at the back of the Isle of Wight ; but the quarter in which, perhaps, it most frequently makes its appearance is the Faro of Mes-

And mountain-rocks, torn from their base abrupt,
Seem oft to hover, blotting now the sun

sina in Italy. In all these places, when the weather is perfectly calm, and, consequently, the sea almost without motion, the atmosphere, more especially in a dry and hot season, imbibes a considerable portion of the water upon which its lower stratum presses; and hence, in the night-time, becomes condensed and hazy. As the morning rises, however, and the sun-beams resume their vigour, the atmosphere once more rarefies, and re-acquires its transparency. If it rarefy equably, and homogeneously, every object beheld through it must necessarily be exhibited in its real proportion and figure: but it happens, occasionally, that in some parts of its texture, it seems to be more closely interwoven than in others; and hence in its general expansion, *veins*, or *striæ*, like those often discovered in glass, make their appearance, of different densities and diameters. In this case, every *stria*, like every globule of rain, in consequence of the variation of its density from the common density of the atmosphere, becomes a refracting or a reflecting body; in other words, a prism, or a mirror, or both. If, then, a single globule of rain, properly disposed, be able to produce a phænomenon so marvellous as that of the rainbow, what phænomena may we not expect, what variation, inversion, contorsion, and grotesque and monstrous representation of images, beheld through a column of the atmosphere, intersected by so many aerial prisms of different densities, and mirrors of different surfaces, in which the catheti may be innumerable, and for ever varying? We may hence, moreover, readily trace the cause of an occasional duplication of images in the atmosphere, of a parhelion, and paraselene, or double sun, and double moon, from the reflection of these luminaries in an opposite part of the heavens, when they are a little above the horizon; as also of the very curious mirage remarked by M. Monge in the hot and sandy desert between Alexandria and Cairo, in which, from an inverted image of the cerulean sky intermixed with the ground scenery, the neighbouring villages appeared to be surrounded with the most beautiful sheeting of water, and to exist, like islands, in its liquid expanse, tantalizing the eye by an unfaithful representation of what was earnestly desired.

The mirage has not been suffered to lie neglected by the poets. It is to the aerial phantoms exhibited by this meteor, that Milton alludes, in the following verses:

As when, to warn proud cities, war appears
Waged in the troubled sky, and armies rush
To battle in the clouds; before each van
Prick forth the airy knights, and couch their spears,
Till thickest legions close; with feats of arms
From either side of heaven the welkin burns.

From the same image, Klopstock appears to have derived the idea of the rising and variegated vapour that formed the celestial body of Rachel in the picture of her ascension from the grave. The whole delineation is beautiful, and requires no apology for being quoted:

Als sie noch redet, erhub sich um ihren fuss von dem grabe
Sanftaufwallender duft, ein wölkchen, wie etwa die rose,
Oder ein frühlingslaub einhüllt, das silber herabträuft.
Rahels schimmer umzog den schwimmenden duft mit golde,
Wie die sonne den saum der abendwolke vergoldet.
Und ihr auge begleitet des duftes wallen. Sie sieht ihn,
Anders um sich, und wieder anders gebildet, herumziehn,
Steigen, sinken, zuletzt stets mehr sich nahen und schimmern.
Und sie bewundest den tiefsinn der immeründerndea schöpfung,
Unergründlich, in grossem, und unergründlich im kleinem,
Ohne zu wissen, wie nah der schwebende duft ihr verwandt sey,

Montibus anteire, et solem subcedere propter:
Inde alios trahere, atque inducere, bellua nimbos.
Nunc ea, quam facili et celeri ratione gerantur,
Perpetuoque fluant ab rebus, labsaque cedant.
Semper enim summum quidquid de rebus abundat,
Quod jaculentur; et hocc', alias quom pervenit in res,
Transit, ut in primis vestem: sed, ubi aspera saxa,
Aut in materiam ligni, pervenit; ibei jam
Scinditur, ut nullum simulacrum reddere possit.
At quom, splendida quæ constant, obposta fuerunt,
Densaque, ut in primis speculum est; nihil adcidit horum:
Nam neque, utei vestem, possunt transire, neque ante

Und wozu ihn nun bald des allmächtigen stimme, Versöhner,
Deine stimme nun bald erschaffen werde! Sie neigt sich
Heber ihn, und betrachtet ihn stets mit froherem bleike.
Mit gefulteten handen, voll süsser namloser freuden,
Stand ihr engel, und sah's. Jetzt scholl des allmächtigen stimme!
Rahel sank. Ihn daucht' es, als ob sie in thränen zerflösse,
Sanft in frendenthränen; hinab in schattende thale
Quölle: sich über ein wekendes blumenvolles gestade
Leicht erhübe: dann neugeschaffen unter den blumen
Dieses gestades, und seiner düfte gerüchen sich fände
Jetzt erwachte sie ganz! Sie fülte sich, sahe sich wusst' es
Dass ein neuer unsterblicher leib sie umgab. Mit entzückung
Sieht sie gen himmel, und dankt dem, der vom tode sie aufrief.

Thus, as she spoke, below her, from the grave,
Sprang a light cloud in many a fragrant wave,
Such as the rose, the vernal arbour breathes
When blooms of silver spangle all its wreathes.
As streaks of radiance eve's bright cloudlets gild,
So the pure vapour Rachel's glory frill'd.
She mark'd the hovering mist, in changeful guise
Now float amain, now sink, and sinking rise,
Near, and still nearer. With exulting sight
She ey'd the wonders of creative might,
Wonders alike in little as in great,
Nor deem'd the meteor could to her relate,
Nor into what th' Almighty word, once pass'd,
Thy word, Redeemer! could the vision cast.
Musing she press'd, and with exulting eye,
Met it. Her guardian spirit hover'd nigh;
View'd the rapt saint, with nascent life endu'd,

With front oppos'd, now deep diffus'd behind,
Gend'ring fresh clouds, a monster each to view.
Mark, now, how swift such phantoms form—how swift
Exhale from all things, and, when form'd, dissolve.
A steam there is that from the face of things
Pours forth perpetual. This, when urg'd amain
On porous textures, as the cloaths we wear,
Pierces entire: when bold with wood, or stone
It dares conflict, the subtile membrane breaks,
Nor aught returns of semblance; but when flung
On dense and splendid objects (foremost such
Shines the pure mirror) nought of these ensues:
For then nor pierces the light lymph, nor quick

Prompt to support, o'er-ravish'd as he view'd.
Now sounds th' Almighty voice: th' upriser faints,
And melts, so seems it, into tears of saints,
To tears exstatic, o'er some shadowy vale
Shed, hard at hand: mid many a fragrant gale
There woke she first; a bank with flowers enwove
Beneath her stretch'd, an odorous bower above.
There woke she, new-created; there entire
Felt each past sense, relum'd with vital fire;
Gaz'd at th' immortal frame around her spread,
And thank'd the power that rais'd her from the dead.

Ver. 150. *Mark, now, how swift such phantoms form—how swift*
Exhale from all things, and, when form'd, dissolve.] "The rise of images from objects is as rapid as the rise of our ideas," observes Epicurus, in a fragment preserved by Diogenes Laertius, lib. x. Ὅτι ἡ γενεσις των εἰδωλων αμα νοηματι συμβαινει. And their dissolution is as rapid as their origin. This doctrine our poet elegantly illustrates by the perpetual reflection from mirrors, and other polished substances, of the images propelled against their surface: these, not remaining an instant, but being thrown back again into the surrounding atmosphere, and as instantaneously succeeded by fresh emanations. The Newtonian theory offers a similar solution of this curious phænomenon, which is, of course, borrowed from the Grecian school: the only difference consisting in this, that the modern hypothesis accounts for the picture presented from an incessant incidence of luminous corpuscles thrown with the utmost celerity from the parent body upon the surface of a speculum; and the latter, from an incessant ejection of the superficial and unbroken film of the parent body itself: but the image produced is under both systems admitted to be equally transient, and equally succeeded by fresh effluvia, whether of light or continuous film. This doctrine of Epicurus was deduced from the school of Democritus, as we learn from Macrobius. Sat. vii. 14.

Scindi, quam meminit lævor præstare salutem.
Quapropter fit, ut hinc nobis simulacra redundent :
Et, quam vis subito, quo vis in tempore, quamque
Rem contra speculum ponas, adparet imago :
Perpetuo fluere ut noscas e corpore summo
Texturas rerum tenueis, tenueisque figuras.
Ergo multa brevi spatio simulacra geruntur,
Ut merito celer hiis rebus dicatur origo.
Et, quasi multa brevi spatio submittere debet
Lumina sol, ut perpetuo sint omnia plena :
Sic ab rebus item simili ratione, necesse est,
Temporis in puncto rerum simulacra ferantur
Multa modis multis in cunctas undique parteis :
Quandoquidem, speculum quoquomque obvortimus oris,
Res ibi respondent simili formâ, atque colore.
Præterea, modo quom fuerit liquidissima cœli
Tempestas, per quam subito fit turbida fede
Undique, utei tenebras omneis Acherunta rearis
Liquisse, et magnas cœli conplesse cavernas.
Usque adeo, tetrâ nimborum nocte coortâ,
Inpendent atræ Formidinis ora superne :
Quorum quantula pars sit imago, dicere nemo est
Qui possit, neque eam rationem reddere dictis.
Nunc age, quam celeri motu simulacra ferantur,
Et quæ mobilitas ollis, tranantibus auras,

Breaks ere the mirror give the semblance sound.
Hence springs the vision, every object hence,
Oppos'd to splendours, pours perpetual forth
Its mimic likeness; and, perpetual too,
Hence the pure effluence that the likeness yields
Must fleetly rush, reiterated urg'd.
As from the sun each moment many a ray
Must flow that things with lustre may be fill'd,
So from each object many an image light
Streams without end; for, turn howe'er thou please
The splendid plate, still the same semblance springs,
Punctual in form, appropriate in its dyes.

Oft, too, the lucid front of heaven serene
Blackens abrupt; in subtlest vapours veil'd
So blackens, fancy may conceive all hell
Had with his direst shades the welkin storm'd,
Shivering with Horror every human nerve.
But what such vapours to the films of things?
These who can calculate? what powers of mind
Scan their light textures, or their woof unfold?
Thus prov'd attenuate, mark, benignant, next,
Their keen rapidity: with what vast speed

Reddita sit, longo spatio ut brevis hora teratur,
In quem quæque locum divorso numine tendit,
Suavidicis potius, quam multis, versibus edam:
Parvus ut est cycni melior canor, ille gruum quam
Clamor, in ætheriis disparsus nubibus austri.

Principio, persæpe leveis res, atque minutis
Corporibus stanteis, celereis licet esse videre.
In quo jam genere est solis lux, et vapor ejus;
Propterea, quia sunt e primis facta minutis:
Quæ quasi cuduntur, perque aëris intervallum
Non dubitant transire, sequenti concita plagâ:
Subpeditatur enim confestim lumine lumen,
Et quasi protelo stimulatur fulgure fulgur.

Ver. 181. *Thus prov'd attenuate, mark, benignant, next,*
Their keen rapidity:——] Lambinus who, in his annotations upon Lucretius, has closely compared the text of the latter with the venerable reliques of Epicurus, as preserved by Diogenes Laertius, has traced an observation to the same effect, commencing Και μην και ἡ δια του κενου (των ειδωλων) φορα, &c.

Ver. 186. ——*as the swan's lone dirge*
Flows forth superior to the clam'rous croak] Marchetti has, in this instance, totally mistaken the whole passage:

Parvus ut est cycni melior canor, ille gruum quam
Clamor, in ætheriis disparsus nubibus austri.

It is obvious, from the opposition of *cycni* to *gruum*, that the term *parvus* is meant to imply smallness or individuality contrasted with magnitude or numbers; and not lowness, in opposition to loudness. And it is equally obvious, that *auster* is used synecdochally for the wind at large, from whatever quarter it may blow: but the Italian version confines it to the *south* only: "the *low* song of the swan is more grateful than the noisy clamour of cranes among the clouds, when the SOUTH *wind* agitates the great fields of ether."

Qual più grato è dé cigni il canto *umile*
Dal gridar, che le grue fan tra le nubi,
Se i gran campi dell' aria *austro conturba*.

On the vulgar fiction of the music of the dying swan, I have already animadverted, in Note on Book III. v. 8., and noticed the fondness and frequency, with which the poets of Greece and Rome recurred to it as an emblem of their own musical powers.

In modern poetry, this application has not been so generally exhibited, but a reference to the original

Fleet they through ether, with elastic wing
Conqu'ring dull time, urg'd various to their goals.
This shall the muse in melodies evince
More sweet than prolix; as the swan's lone dirge
Flows forth superior to the clam'rous croak
Of countless cranes, by every wind disperst.
Know, then, th' attenuate substance must move quick;
But few th' exceptions. Hence the rapid race
Of light, and lustre from th' effusive sun,
Since these, too, spring from atoms most minute,
With ease protruded, by posterior force
Urg'd on; for light for ever light succeeds,
And floods of splendour floods of splendour drive.

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fiction itself is to be found in the poetry of every European nation; though, so far as I recollect, it appears to have been a more favourite ornament among the Spanish bards, than among those of any other country. It is repeatedly adverted to by Garcilaso de la Vega; and the gallant Francisco de Borja offers us the following instance:

Aquì, dulce Senora,
Mi amarga muerte entre esta yerva verde
Cantando al alma llora,
Qual blanco cisne, que la vida pierde.

Here, lady fair! in these green vales,
As the white swan when nature fails,
My spirit chaunts with many a sigh
The bitter death I'm doom'd to die.

It is impossible to peruse the latter part of our poet's comparison, without being reminded of the following verses of Homer:

Αἴτ', ἐπεὶ οὖν χειμῶνα φύγον, καὶ ἀθέσφατον ὄμβρον,
Κλαγγῇ τε πέτονται ἐπ' ὠκεανοῖο ῥοάων. Il. Γ. 3.

As the mixt clangour of tumultuous cranes
That, mid descending frosts and rushing rains,
Fly clam'rous o'er the deep.

The whole, however, appears to have been a proverbial expression, as well among the Greeks as the Romans, as we may conjecture from the following distich of Antipater:

Λοιπὸς κύκνου μικρὸς ἔρις ἐκ κολοιῶν
Κραγμός, ἐν ἐκφύσαις κιδναμένοις πτερύγαις.

Errinn, Lib. III. Epig.

Sweeter the swan's lone chaunt than clamours loud
Of countless jays, dispers'd with every cloud.

Ver. 194. ——*light for ever light succeeds,*
And floods of splendour floods of splendour drive.] In like manner Thomson:

Quapropter simulacra pari ratione necesse est
Innumerabile per spatium transcurrere posse
Temporis in puncto: primum, quod parvola caussa
Est procul a tergo, quæ provehat, atque propellat:
Deinde, quod usque adeo texturâ prædita rarâ
Mittuntur, facile ut quas vis penetrare queant res,
Et quasi permanare per aëris intervallum.
Præterea, si, quæ penitus corpuscula rerum
Ex altoque foras mittuntur, solis utei lux
Ac vapor, hæc puncto cernuntur labsa diei
Per totum cœli spatium diffundere sese;
Perque volare mare ac terras, cœlumque rigare;
Quod super est, ubi tam volucri levitate feruntur,
Quid, quæ sunt igitur jam primâ fronte, parata,

O'er heaven and earth, far as the ranging eye
Can sweep, a *dazzling deluge* reigns; and all,
From pole to pole, is undistinguis'd blaze.
Summer, 434.

Ver. 202. ——*oft sublimely bound,*
And quit the surface, as the sun's pure light,] The generation of light in the sun was supposed, by the schools of Democritus and Epicurus, to be conducted in some such mode as the generation of vital fluids in animals. The sun was conceived to be fed for this purpose with the pabulum of ether, absorbed through all its external pores, as extraneous matters are absorbed by the bibulous mouths of the lymphatics in the animal system. The ether thus absorbed was, by a kind of secretory process, converted into light, and immediately thrown forth by a system of exhaling vessels over the whole horizon, as the matter of perspiration is thrown forth from the human body. And, perhaps, the fluid of light is actually secreted in some such manner in the frames of the glow-worm, fire-fly, and other insects of the phosphorescent order. See Note on Book I. 772. But in what manner the sun himself is supplied, upon the Newtonian system, with the means of perpetuating his own lustre without exhaustion, philosophers are by no means agreed: for, though, as I have already observed in the Note on Book II. v. 166. they are capable of measuring the velocity of light; they have not yet been able to analyse its substance, or to ascertain whether it be simple and elementary, or compound and mixt. The latter was peculiarly the opinion of Lucretius, and is indeed supported by various facts of the present day. Among the most curious and decisive of these, although they have hitherto been never appealed to upon this subject, are some late experiments of M. Humboldt inserted in M. Mirbell's Traité d'Anatomie et de Phisiologie Vé-

Hence, from like cause, the semblances of things
Through countless space must instantaneous rush;
For equal powers propollent press behind,
And the same texture rears them that pervades
Forms most compact, and fills th' aerial void.
If, too, those particles of things that lurk
Deep in th' interior, oft sublimely bound,
And quit the surface, as the sun's pure light,
And lustre fair, if instant these we view
Rush through all space, o'er earth and main diffuse,
And heaven's high arch, by utmost lightness wing'd;
Say, what the speed of atoms plac'd supreme,

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gétales, which clearly evince, that the presence or access of light is not absolutely necessary for the production of colours in vegetables. "This naturalist," observes M. Mirbell, "has remarked a very *green* lichen of an extraordinary size in subterraneous cavities where the light never penetrated. He has raised in the same excavations crocuses, whose flowers were *perfectly well coloured*. He has deposited in the same cavities the geranium odoratissimum of Linnéus, and the mosses named by Hedwig Barbula ruralis, and Neikera viticulosa: they have continued to vegetate, and their *green* colour has remained. These subterraneous cavities were filled with hydrogen to such a degree, that the flame of a candle was extinguished, and the lungs severely affected by its gass. Such experiments, in connection with many others, induced Humboldt to conceive, that hydrogen without light, and with a small proportion of oxygen, is sufficient for vegetation."

But if the colours of plants depend upon oxygen or hydrogen, or both, then must one or both these gasses be a constituent principle of light, from which all colours are commonly derived. Yet light, instead of being compounded of oxygen, has inversely been supposed of late by Mr. Davey, to enter into oxygenous gass as a principle of this gass itself. Be this, however, as it may, it is obvious from these experiments, that the colouring matter of light is capable of existing, either with light or without it; and, consequently, that light itself, agreeably to the Epicurean doctrine, is a compound body, and not an elementary substance. From the verses which introduce this note, it seems to have been conceived by this school, that the sun was a kind of luminous laboratory, preparing the ejected fluid by some process in its interior structure, as well as propelling it from its surface.

Quom jaciuntur, et emissum res nulla moratur,
Quone vides citius debere, et longius, ire;
Multiplexque loci spatium transcurrere eodem
Tempore, quo solis pervolgant lumina cœlum?
Hocc' etiam in primis specimen verum esse videtur,
Quam celeri motu rerum simulacra ferantur:
Quod, simul ac primum sub diu splendor aquaï
Ponitur, ex templo, cœlo stellante sereno,
Sidera respondent in aquâ radiantia mundi.
Jamne vides igitur, quam puncto tempore imago
Ætheris ex oris in terrarum adcidit oras?
Quâ re etiam atque etiam mirâ fateare necesse est

Ver. 216. ——*the curious eye*
Marks in the lymph, responsive, *every star*] With like elegance of imagery, Statius:

——nemora alta citatis
Incubuere vadis: fallax *responsat* imago
Frondibus, et longas eadem fugit umbra per undas. Silv. I. 319.

High hangs the forest o'er the ruffled stream:
Th' illusive image to the rustling leaves
Answers, and far the mimic shade propels.

So, Prov. xxvii. 19. in the common English version; for, in the Hebrew, the word, *answereth*, is supprest by an ellipsis:

As in water, face *answereth* to face,
So the heart of man to man.

Ver. 221. *Hence doubly flows it*——] In the original, v. 217. thus:

Quâ re etiam atque etiam mirâ fateare necesse est.

Which compulsory expression, Marchetti thus renders:

Sicchè voglia, o non voglia, è pur mestiero.

That the tenet here contended for was professed by Epicurus, we learn from Diog. Laert. x. 44. Plutarch Plac. Phil. iv. 13. and more fully still from Aulus Gellius, in the following declaration: Epicurus effluere semper ex omnibus corporibus simulacra quædam corporum ipsorum, eaque sese in oculos inferre: atque ita fieri sensum videndi putat. "Epicurus maintained, that certain semblances of objects flowed forth perpetually from the objects themselves, and were carried towards the eyes: and hence, he accounted for the sense of vision."

One of the chief objections to this theory is the difficulty of conceiving the possibility that films

Pour'd from the front of things, by nought delayed?
Seest thou not these, in the same point of time,
With swifter flight through ampler bounds must dart
Than the blue radiance that through ether streams?
To proofs thus cogent of the rapid race
Of insubstantial semblances, adjoin
This fact decisive; that, when once at night,
Beneath the spangled concave, gleams the vase
Fill'd from the bubbling brook, the curious eye
Marks in the lymph, responsive, every star
That strews with silver all the radiant pole.
Seest thou not hence, then, in what point of time
Th' etherial image darts from heav'n to earth?
Hence doubly flows it such stupendous forms

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thus supremely attenuate, should be able to resist, without total destruction, the friction of the column of air, through which they must pass before they reach the eye: or that those which have reached it, and communicated the picture, should be able to return without jostling against, and disarranging others which are still travelling in a regular direction to the same organ. Of the former part of this difficulty, our philosophic poet is fully aware; and he at least palliates it, by admitting, that the effluent semblances of all objects are, in effect, constantly injured by the friction of the aerial medium; and, that the injury they sustain is in a precise ratio to the space they intersect: and, hence, he ingeniously accounts, as will be found in the progress of the argument, for the accuracy with which the sight determines upon objects near us, and the confusion and fallacy that too frequently attend its decisions upon those at a distance (see v. 372—382): the projected effluvium being considerably abraded or frittered by the tide of air, through which it travels from the objective substance, till at length, with increase of distance, and, of course, increase of friction, it becomes totally destroyed and dissipated.

This solution, nevertheless, though ingenious, is by no means satisfactory; nor am I aware of any principle, upon which the philosophy of Epicurus accounts for the perpetual return of projected images, whether from the eye or the mirror, without interfering with, and injuring those which are advancing towards the same spot. But is the difficulty totally annihilated by the Newtonian system? The current of light strikes upon every object that surrounds us; or, if it do not absolutely strike upon it, reaches its surface as nearly as possible, without actually impinging upon it. Instead of a perpetual projection of filmy emanations, we have now, therefore, a perpetual projection of the nearly impinging light which is

Corpora, quæ feriant oculos, visumque lacessant,
Perpetuoque fluant certis ab rebus obortu ;

thrown back from every luminous object towards the organ of vision, and which, in the same manner, by its stimulus upon the optic nerve, creates the sensation of sight: we have an emanation of light instead of an emanation of pellicle. But, *à priori*, is it not as difficult to conceive, that the fine and attenuate matter of light should thus travel through, perhaps, miles of resisting air, uninjured and in undeviating succession, before it reaches the field of vision, as that a rare and perpetual efflux of the matter of the parent object itself should do the same?—The fluid of light again radiates at all times, we are told, in diverging and parallel lines from every point of the luminous body that emits it: but the crystalline humour of the eye, and indeed all other convex lenses whatsoever, possess a peculiar and extraordinary power over this attenuate fluid, and bend the whole pencil of its rays that are reflected from the disc of the object surveyed, even at a considerable distance from itself, from a diverging to a converging direction, till at length, however broad the surface from which they are thrown off, provided they be within the measurement of a right line from the pupil, they are concentrated into one point or focus, and in this collective state enter the lens itself. I do not controvert these facts: experience has confirmed them beyond all power of disbelief; but I contend, that *à priori*, without the testimony of such experience, there would be as much difficulty in bringing the mind to accredit this principle of the modern system of optics, as that invented by the atomic philosophers of Greece.—Perhaps, one of the most mysterious parts of the Newtonian theory is the doctrine which asserts the inversion of the picture of objects in passing through the cornea; nor is the explanation either of Kepler or Berkeley altogether satisfactory. The crystalline humour of the eye is declared to form an optical convex lens of most exquisite workmanship, and not differing, in any point, from the common properties of convex lenses extraneous to the body. It is a decided fact, that the rays of reflected light, which convey the picture of an object through an artificial convex lens, are not only concentrated to a focus, but, in consequence hereof, cross each other at their central point or axis of refraction, and totally invert the order of the picture they convey, so that the upper part of it, when thus surveyed, becomes the lower, and the right side changes place with the left; in passing through a second convex lens, the true disposition is resumed, for the second corrects the error of the first; and if a third be employed, we are again deceived, and the image once more appears inverted. If, then, it be a fact that the crystalline of the eye possess all the common properties of the artificial convex lens, it follows, as an indubitable conclusion, that nothing in nature is beheld as it actually exists, but every thing in a mode precisely contrary to its true position: that what I see on my right hand is, in reality, on my left; that the heavens, instead of being above me, are below, and the earth, instead of being below, is above; or, rather, that we give a wrong and converse interpretation to these opposite terms. Such a doctrine must, at least, appear extraordinary to the multitude: but it is a doctrine which flows inevitably from the modern theory of optics; and which must be contended for, or the theory itself be abandoned. Kepler, Des Cartes, and Newton, have all, therefore, contended for it; and their ingenuity has been at work for an explanation of the apparent incongruity it offers. We are told, that although the deception exists, the uniformity of our habit and experience corrects the evil that would otherwise follow. That the heavens, it is true, are painted to the eye itself as downwards, and the earth as upwards, but that from habit, and the examination and correction of our other senses, we are led to invert the picture in our own minds, to transfer its features to opposite points, and to admit the idea of downwards to that part of it which is exhibited upwards upon the speculum of the eye itself, and the idea of left to that which is presented to the right. The explanations of Lucretius are ingenious, but not always satisfactory: this is also an ingenious explanation, but does it

Must crowd the horizon, and the sight compel,
Of things defin'd born ceaseless. From the sun

give the mind much more satisfaction than the former?

The fluid of light, if it actually impinged against bodies of the most polished make, must, in consequence of the harshness and irregularity which, in spite of all their gloss, they still possess at their surface, very imperfectly reflect the light which thus strikes against them, and render the image, which would be hereby communicated, extremely deceptive and inadequate. This, and several other objections of equal validity, have been long urged against the Newtonian system: and how is the difficulty surmounted? Why, the current of light, Sir Isaac informs us, never does absolutely impinge against any substance, without being totally lost and absorbed; except in the case of transparent or diaphonous bodies, which it transpierces without injury: but that all bodies by which it is refracted or reflected, so as to give to the eye the picture of the body itself, by a most extraordinary power, refract or reflect it before it comes into actual contact. This, too, is an ingenious solution, but it is nothing more; we have no adequate proof of the fact whatsoever: and it labours under this additional evil, that if it be difficult to account for a perfect communication of the image of even the most glossy and polished objects to the pupil, it is, at least, as difficult to conceive, that a column of light can be acted upon by a substance towards which it is approaching, and repelled from it before it touches it, and without the existence of any known or apparent medium. However ingenious the solution, nothing, therefore, appears to be gained by it: we only lose one objection to be involved in a second of at least equal magnitude. Mairan and Du Tour have, indeed, endeavoured to surmount this additional objection; and what is the explanation they advance? That all substances have an atmosphere of a certain density and extent thrown forth around them, composed of the finer particles of their own constituent substance; and that this becomes the medium by which they repel the advancing column of light, and communicate the image of the parent object before it absolutely reaches the object itself. But what proof, I inquire, have we of such an existence? and if it be admitted, do we not admit, at the same time, the very first principle of the Epicurean theory of optics which merely contends for the truth of such an atmosphere, which, it asserts, is propelled to a greater distance than is wished for by the French philosophers, and produces the image by such propulsion alone?

I do not enumerate these objections to overthrow the Newtonian theory—that is totally out of my power—but only to evince, that if the Epicurean hypothesis be so loaded with difficulties as to compel us to reject it, we have, nevertheless, not exchanged it for a system that is altogether impeccable.

The general principles of the Newtonian hypothesis are, nevertheless, fixed upon the most impregnable basis; and are the result of facts and experiments equally clear and incontrovertible. Yet, in pointing out the errors of the prior system of Epicurus, it is but fair to give a glance at the difficulties which still attach to this justly boasted discovery of modern times. These difficulties and defects have long, indeed, been noticed by philosophers of the first reputation and ability; and Malbranch, Huygens, Euler, and the Bernouillis, have strenuously attempted to establish others upon its destruction. But objectionable as it is, the various hypotheses they have offered in its stead have been justly deemed more objectionable still; and the Newtonian theory is yet predominant, and, perhaps, ever will be so in the republic of letters.

Ver. 223. *Of things defin'd born ceaseless.*] All the common editions of Lucretius have a most intolerable and absurd reading of the verse of which this is intended for the translation. In connexion with the two preceding, they make it run thus:

Quare etiam atque etiam *mitti* hæc fateare necesse est
Corpora, quæ feriant oculos, visumque lacessant:
Perpetuòque *fluunt* certis ab rebus ODORES.

Frigus ut a fluviis, calor ab sole, æstus ab undis
Æquoris, exesor mœrorum litora circum :
Nec variæ cessant voces volitare per auras :
Denique, in os salsi venit humor sæpe saporis,
Quom mare vorsamur propter ; dilutaque contra
Quom tuimur misceri absinthia, tangit amaror.
Usque adeo omnibus ab rebus res quæque fluenter
Fertur, et in cunctas dimittitur undique parteis.
Nec mora, nec requies, inter datur ulla fluundi ;
Perpetuo quoniam sentimus, et omnia semper
Cernere, odorari, licet, et sentire sonare.

Præterea, quoniam manibus tractata figura
In tenebris quædam cognoscitur esse eadem, quæ
Cernitur in luce, et claro candore ; necesse est
Consimili caussâ tactum, visumque, moveri.
Nunc igitur, si quadratum tentamus, et id nos
Conmovet in tenebris ; in luci quæ poterit res

To the indefatigable investigation of Mr. Wakefield are we indebted for the true restitution of the text, which he has given from several unexceptionable codices in his possession ; and in this regenerated form it occurs as follows :

Qua re, etiam atque etiam, *mirâ* fateare necesse est
Corpora, quæ feriant oculos, visumque lacessant,
Perpetuoque *fluant* certis ab rebus OBORTU.

It should be stated, however, to the praise of Marchetti, that he also has obtained possession of the same lection, and has faithfully adhered to it in his version :

——è par mestiero
Che tu confessi esser vibrati intorno
Questi minimi corpi atti a ferirne
Gli orchi, e la vista provocarne, e sempre
NASCERE, ed esalar da cose certe.

Every other translator with whom I am ac-

Thus heat exhales, cold, dewy damp from streams,
And the rough spray from ocean, with fierce fang
Gnawing the mound that dares resist its waves.
Thus sounds, too, hover in the breezy air;
And, when the beach we traverse, oft the tongue
Smarts with the briny vapour: or if chance,
By dextrous leech, fell wormwood near be bruis'd,
We taste th' essential bitter, and abhor.
Thus some light effluence streams from all create,
Streams forth for ever, void of dull repose,
Towards every point diffus'd: for man perceives
Where'er his station, sight alike exists,
The sense of fluent odours, and of sounds.
And as, moreo'er, th' essaying hand decides
Oft in the dark an object as precise
As the keen eye at mid-day,—hence we deem
Touch and the sight by equal causes sway'd.
Thus, if a cube we handle, and, at night,
Its shape assure us, what but the mere shape

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quainted, French or English, in prose or verse, has followed the vulgar reading, and entered into the common error.

Ver. 223. ——*From the sun*
Thus heat exhales,——] This verse, to ver. 236. inclusively, offers us an additional anaphora, and will be found repeated in Book VI. v. 954. and following.

Ver. 231. *We taste th' essential bitter, and abhor.*] Lambinus has copied an observation from Servius, that the original of this verse has been imitated by Virgil in his Georgics:

At sapor indicium faciet manifestus, et ora
Tristia tentantum sensu torquebit amaror. ii. 247.

Soon will the stream its bitter power betray,
And lips that taste, distorted turn away.

Adcidere ad speciem, quadrata nisi ejus imago ?
Esse in imaginibus quapropter caussa videtur
Cernundi, neque posse sine hiis res ulla videri.
Nunc ea, quæ dico, rerum simulacra feruntur
Undique, et in cunctas jaciuntur didita parteis :
Verum, nos oculis quia solis cernere quimus,
Propterea fit, utei, speciem quo vortimus, omnes
Res ibi eam contra feriant formâ, atque colore.
Et, quantum quæque ab nobis res absit, imago
Ecficit, ut videamus, et internoscere curat.
Nam, quom mittitur, ex templo procudit agitque
Aëra, qui inter se quomque est oculosque locatus ;
Isque ita per nostras acies perlabitur omnis,
Et quasi pertergit pupillas, atque ita transit.
Propterea fit, utei videamus quam procul absit
Res quæque ; et quanto plus aëris ante agitatur,
Et nostros oculos perterget longior aura,
Tam procul esse magis res quæque remota videtur.
Scilicet hæc summe celeri ratione geruntur,
Quale sit, ut videamus ; et unâ, quam procul absit.

Illud in hiis rebus minume mirabile habendum est,

Ver. 244. *Hence shapes, hence images alone create*
All we survey, of vision the sole cause :] The origin of this axiom is yet to be found in the reliques of Epicurus. It is preserved by Diogenes Laertius, and occurs in the epistle to Herodotus : Δει δε και νομιζειν, επεισκεντος τινος απο των εξωθεν τας μορφας ὁραν ημας και διανοεισθαι. Ου γαρ αν αποσφαγισαιτο τα εξω των εαυτων φυσιν, &c.

Proves the same substance is a cube by day ?—
Hence shapes, hence images alone create
All we survey, of vision the sole cause:
And hence from every object forms like these
Towards every point must radiate; since the eye,
Source of all sight, where'er its orb inclines,
Sees all that moves, in shape and hue precise:
And since such semblances alone decide
How distant dwells each substance we discern.
These sole decide; for every film exhal'd
Drives on immediate the recumbent air
Plac'd 'twixt the visual orb, and object view'd.
Then fleets its total column, o'er the ball
Rushing amain, till all its gradual length
Strikes on the sentient pupil, and retires.
Hence how far distant judge we things exist;
And as an ampler air, and larger tide
Of friction goad the vision, cautious, thus,
Deem more remote th' objective substance lies.
While such the speed evinc'd, at once we tell
The thing survey'd, its distance and its kind.
Nor wondrous this, that, though, when singly urg'd,

Ver. 264. ——*when singly urg'd,*
Each sep'rate image viewless strikes the sight,]
The meaning is too obvious to require a comment:

——videri
Singula quom nequeant,——
and yet Des Coutures has given a translation which it was impossible for himself to have understood:

Quur ea, quæ feriant oculos simulacra, videri
Singula quom nequeant, res ipsæ perspiciantur.
Ventus enim quoque paullatim quom verberat, et quom
Acre fluit frigus, non primam quamque solemus
Particulam venti sentire, et frigoris ejus,
Sed magis unvorsum : fierique perinde videmus
Corpore tum plagas in nostro, tamquam aliquæ res
Verberet, atque sui det sensum corporis extra.
Præterea, lapidem digito quom tundimus, ipsum
Tangimus extremum saxi, summumque colorem :
Nec sentimus eum tactu, verum magis ipsam
Duritiem penitus saxi sentimus in alto.
Nunc age, quur ultra speculum videatur imago,
Percipe ; nam certe penitus remota videtur ;
Quod genus illa, foris quæ vere transspiciuntur,

" Il ne fant pas s'etonner si les simulacres affectant les yeux sans se rendre visible, ne laissent pas neanmoins par leur ecoulement perpetuel, de representer les choses dont ils sont partis." It is in such interpretations as these, we are compelled to consult the text to explain the paraphrase, instead of consulting the paraphrase to explain the text.

Ver. 277. *Now next unfold we whence the semblance seen*
In the clear mirror, far beyond recedes, &c.] Having developed the general principles of optics, our philosophic poet now advances to that particular branch of the theory which is denominated catoptrics, or the science of reflected bodies ; in the consideration of which he enumerates a variety of arduous, but entertaining problems, and explains them upon his own hypothesis, in a manner at all times wonderfully ingenious, and often incontrovertibly accurate : and which reflects no small degree of credit upon the judgment and industry with which he pursued subjects of this nature.

Upon the hypothesis of Epicurus, the fluent semblances of all objects, impinging upon the polished surface of a body that is not diaphonous, is neither absorbed nor deflected, but returned or reflected uninjured into the atmosphere ; they, of course, meet the eye in this reflected state, in the same manner, and with the same truth of representation with which they meet the eye in a direct line from the object itself. There is, undoubtedly, as I have already observed, an extreme difficulty in conceiving how a perpetual tide of images travelling backwards in consequence of reflection, and of images travelling forwards to the re-

Each sep'rate image viewless strikes the sight,
The parent form springs obvious. When severe
Blows the fresh breeze, each particle of wind,
Of bitter cold the sense can ne'er discern,
But the full body rather: then the frame
Shrinks as though blows from some exterior foe
Were plied perpetual, every nerve assail'd.
When, too, the finger o'er the polish'd spar
Lets fall its weight, it touches then alone
The crystal hues, and surface; yet nor hues
Nor surface feels it, but the hardness sole
Its total body boasts, compact and firm.
Now next unfold we whence the semblance seen
In the clear mirror, far beyond recedes,
Or so pretends, deceptive. Sleights like these

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flecting body, and this frequently in the very same path or line of incidence, should be able to pass either by or through each other without injury. But the difficulty, as I have already observed, is by no means altogether removed by the Newtonian theory. Here the reflected image, from a speculum or polished body, is communicated to the organ of vision by a repulsion of the rays of light which first conveyed it to the speculum, in a direct line from the object it represents. In this case, therefore, there must be precisely the same opposition of path, and consequently of contest, between the tide of rays returning from the speculum, and those advancing towards it; and it is not much more easy to conceive how such an opposition and contest can occur between antagonist pencils of light, than antagonist pellicles of bodies, without a destruction of the image they convey.

Lucretius commences with a few problems on the plane mirror, or, as it is commonly denominated, the looking-glass; and he here accounts, in terms too clear to require a paraphrase, for the image of a radiant point appearing just so far behind it as the object or radiant point is itself before it. It would occupy too much space to enter into a full comparison of the solution of all the different and curious phænomena that follow, as advanced by our poet, and the common system of modern optics. The grand canon by which the latter resolves the problem here exhibited, as well as many others connected with it, is, that "in a plane mirror every point of an object is seen in the intersection of the cathetus of incidence with the reflected ray."

Janua quom per se transspectum præbet apertum,
Multa facitque foris ex ædibus ut videantur:
Is quoque enim duplici geminoque fit aëre visus.
Primus enim citra posteis concernitur aër;
Inde fores ipsæ dextrâ, lævâque, sequuntur:
Post extraria lux oculos pertinget, et aër
Alter, et illa, foris quæ vere transspiciuntur.
Sic, ubi se primum speculi projecit imago,
Dum venit ad nostras acies, procudit agitque
Aëra, qui inter se quomque est oculosque locatus:
Et facit, ut prius hunc omnem sentire queamus,
Quam speculum: sed, ubi in speculum quoque sensimus ipsum,
Continuo, a nobis in eum, quæ fertur, imago
Pervenit, ac nostros oculos rejecta revisit:
Atque alium præ se propellens aëra volvit,
Et facit, ut prius hunc, quam se, videamus: eoque
Distare a speculo tantum semota videtur.
Quâ re etiam atque etiam minume mirarier est par
Illis, quæ reddunt speculorum ex æquore visum
Aëribus binis; quoniam res confit utrâque.

We trace for ever when th' attentive eye
Peeps in some hall, beyond th' unfolded doors,
And through their visto marks the scene without.
In both a twin, a double tide of air
Strikes on the vision. In the mansion thus
First floats th' interior ether, bounded close
By the broad portals opening right and left,
Then light external, and another air
Assail the pupil, and the real scene
At last developes. Thus the semblance too,
The mirror's self projects, as towards the sight
It yet, yet tends, the midway air protrudes
Plac'd twixt the visual orb, and object view'd;
Whence first th' aerial tide assaults us ere
Conspicuous springs the mirror; which survey'd,
Next instant flows the semblance from ourselves
Ceaseless exhal'd, and from the splendid plate
Reflected punctual, visiting in turn
The sentient eye-ball, and in turn its tide
Of air first forcing o'er the goaded view;
Thus doubly distant, and the glass beyond
Painting the mimic image we discern.
Hence not the meanest marvel can attach
To forms reflected from the fulgent plain
Through two-fold airs, by the twin tide resolv'd.

Nunc ea, quæ nobis membrorum dextera pars est,
In speculis fit, utei lævâ videatur, eo quod
Planitiem ad speculi veniens quom obfendit imago,
Non convortitur incolomis; sed recta retrorsum
Sic eliditur, ut si quis, prius arida quam sit
Cretea persona, adlidat pilæve, trabive:
Atque ea continuo, rectam si fronte figuram
Servet, et elisam retro sese exprimat ipsa,
Fiet, et ante oculos fuerit qui dexter, ut idem
Nunc sit lævus, et e lævo sit mutua dexter.

Fit quoque, de speculo in speculum ut tradatur imago:
Quinque, etiam sex, ut fieri simulacra suërint.
Nam, quæquomque retro, parte interiore, latebit,
Inde tamen, quam vis torte penitusque remota,
Omnia, per flexos aditus educta, licebit
Pluribus hæc speculis videantur in ædibus esse:

Ver. 302. *Hence, not the meanest marvel can attach*] The deduction summarily exhibited in this and the two following verses, corresponding with ver. 290—292. of the original, is capriciously omitted by Lambinus, who has been followed both by Creech and Marchetti in their respective translations. Creech, however, in his Latin edition, has thought proper to retain the passage; although he has appended a note, in which he justifies the suppression of Lambinus. In Mr. Wakefield, the verses are preserved as they ought to be; and even Des Coutures has justly remarked, that there is no doubt that they belong to Lucretius, and are necessary to the subject; "cette maniere," adds he, "pour conclure une proposition lui est familiere," and he immediately adduces instances of the same kind of termination from Book I. ver. 296. of the original, as also from one or two other places, in which the same phraseology is introduced.

The part, too, of the semblance that to us
The right creates, seems, in the mirror, left:
Hence springs the vision, that when once the film
Strikes on the level radiance, it rebounds
Unalter'd never, by th' elastic blow
In every trait revers'd: as when we dash,
'Gainst some broad beam, the new-made mask of clay
Soft yet, and pliant, if with front direct
It bear the blow, the hollow frame inverts:
Each feature then transposes, the right eye
Claims the left side, the left the right usurps.
From mirror, too, to mirror may we spread
The playful image, till its like, with ease,
Be thrice, or ampler doubled; and till nought
Lurk so retir'd, so deep behind, so hid
In tortuous angles, but that many a plate,
Rightly dispos'd, may yet through every maze
Drag forth the latent landscape, and at large
E'en in the mansion's central depths display.

Ver. 311. ——*the new-made mask of clay*] The following distich of Petronius will sufficiently prove, that the masks of the Roman actors were made of chalk, or modern pipe-clay; and altogether subvert the conjecture of Lambinus, that the *cretea persona* of the common lections ought to be *cressa*, or *Cretæa*; as being a species of plaster at that time imported from the island of Candia or Crete.

Dum sumit creteam faciem, Sertoria, cretam
Perdidit illa simul, perdidit et faciem.

When, o'er her face, the face of chalk appears
Her chalky face no more Sertoria wears.

For the solution of the problem here advanced, upon the principles of the Newtonian theory, I refer the reader to the Note on ver. 277. of this Book.

Ver. 323. *E'en in the mansion's central depths display.*] Almost every house at Basil in Switzerland has, at this day, a number of mirrors affixed

Usque adeo e speculo in speculum translucet imago ;
Et, quom læva data est, fit rursum ut dextera fiat :
Inde retro rursum redit, et convortit eodem.
Quin etiam, quæquomque latuscula sunt speculorum
Adsimili lateris flexurâ prædita nostri ;

against its windows, to reflect the different spectacles that occur in the public streets : and, in many houses, these mirrors are so disposed and multiplied as to throw them upon the hangings of the rooms, like so many moving pictures. Where the mirrors are confined to the windows alone, the ladies who assemble at each other's houses are allotted seats near by them, in proportion to their gradation of rank. Where the mirrors are more multiplied, so as to introduce the picture into the interior of the room, no such distinction is necessary. It is probably to some such fashion, prevalent in his own age, that the poet alludes in the passage now quoted.

Ver. 327. *Mirrors there are, moreo'er, of shape rotund*

With flexile sides——] Whatever may be our opinion of the *theory* of catoptrics among the Greeks and Romans, their *practical* knowledge of the science cannot but excite our surprize, and must have been far greater than is generally acceded to them. The poet here proceeds to the description of the cylindrical mirror, which certainly implies a knowledge of the convex and its properties, and most probably includes that of the concave and spherical. The phænomenon here represented will not occur in every species of cylindrical speculum, but only in those of certain proportions ; it may, also, be exhibited in concave specula, where the proportions are, in like manner, varied for the purpose. But for the relative properties of these peculiar orders, as well as for the general canon by which such problems are resolved, upon the modern system, I must refer to express treatises on optics, in which these subjects are necessarily discussed at large.

It was not, however, to the philosophy of light, shade, and colours alone, that the ancients directed their attention. They made a practical use of them in the elegant arts of designing and painting, in all the different branches of which they acquired a degree of perfection which may well vie with that of later ages. Those who have studied the history of these arts, as succinctly but satisfactorily compiled by Pliny, must be convinced, that there is scarcely a style of modern drawing or colouring which was not known to the Greeks ; who united to these exquisite accomplishments all the collateral ramifications of embroidery, tapestry, brocading, damask-work, in the time of Homer denominated ἐμπαιστα, and every species of mosaic, which, according to the Roman annalist, had a different denomination assigned to each. Thus, we meet with one set of arranged and coloured stones which was called lithostrata ; another, opus tesselatum ; a third, musivum ; a fourth, emblematicum ; and a fifth, vermiculatum ; many of several kinds of which are still carefully preserved in St. Peter's church at Rome, and contribute, in no small degree, to the splendour of that magnificent edifice. Their inlaid works, however, were not confined to stone and marble ; they extended to horn, tortoise-shell, and ivory : and Pliny makes express mention of several exquisite proofs of their taste and ingenuity in inlaying tables, and other furniture, with a mixture of ivory, and woods or barks differently coloured, so as to produce the effect of a finished picture or medallion.

From whom the Greeks derived their first knowledge of designing we know not. According to Pliny, Telephanes of Sicyon and Ardices of Corinth equally contended for the honour : but the species of design he first adverts to, an invention, indeed, prior to any æra that can be ascribed to these artists, is the rude and incondite method of tracing the mere outline of the human shadow when pro-

So glides from glass to glass the semblance true
By each transpos'd in order, right and left
Changing alternate, and again restor'd.
Mirrors there are, moreo'er, of shape rotund
With flexile sides like mortals, that present

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jected upon a wall, a method which still exists among ourselves under the name of a *silhouette*,—*omnes umbrâ hominis lineas circumducta.*

This species of drawing, and, probably, of painting, strictly so called, must have been of very early origin indeed. Embroidery and tapestry, in which colours were introduced, we know to have been of high antiquity even among the Jews and Babylonians; but both these arts presuppose the existence of outlines, or linear drawings,—for the artist necessarily worked from a pattern. The history of Pandion, king of Athens, and of his daughter Philomela, who informed Progné of her misfortunes by describing them on tapestry, may, perhaps, be fabulous. Be this, however, as it may, we know that this fable is of very remote origin; and, as is related by Apollodorus, was, probably, the production of one of the Cyclic poets, concerning whom the reader will find an account in Note on Book V. v. 339. of the present version. According to this admirable mythologist, Philomela did not indeed paint her history, but embroidered it in characters on a veil. Yet, at the period when this fable was invented, we can scarcely conceive, that embroidery was confined to the exhibition of characters alone; it was unquestionably employed, and with more freedom, in the art of tracing and designing. In the time of Homer, however, we have undoubted proof of the application of tapestry to the dignity of historical subjects. Iris, in the third book of the Iliad, finds Helen occupied in representing on tapestry the evils which the Greeks and Trojans had suffered on her account, in their battles. Such an undertaking, even supposing it were executed in cammeo, or with a single colour, evinces a considerable perfection of the art she was practising. But the Trojans are stated to have also acquainted with the mode of intermixing different colours in their tapestries. When Andromache learned the death of Hector, she was at work in a retired part of her palace, and representing, in tapestry, flowers of a variety of tinctures.

Αλλ' ηγ' ἱστον υφαινε μυχῳ δομου ὑψηλοιο,
Διπλακα, μαρμαρεην, εν δε θρονα ποικιλλ' επασσε.
Il. K. 439.

Far in the close recesses of the dome
Pensive she ply'd the melancholy loom;
A growing work employed her secret views,
Spotted diverse with intermingled hues. Pope.

To the mere outline or silhouette the Corinthian or Sicyonian artist, according to Pliny, added strokes to its interior,—*jam tunc spargentes lineas intus;* a style which is yet retained whenever the quill or the crayon is employed; and some admirable drawings, in which are still preserved at Rome as the production of Polydore of Caravagio, a celebrated pupil of Raphäel; the mode of executing which is denominated by the Italians *al sgrafitto.* Our historian then advances to a second epoch, regarding the mere outline, and the outline with internal strokes as one and the same, although I cannot but agree with M. Levesque, in his very ingenious essay on this subject, (Mem. de l'Instit. Nat. Lit. et B. Arts, I.) that the former must, for a long period, have preceded the latter. This second epoch of Pliny comprises the use of a single colour alone, and its style was, in consequence, denominated by the Greeks, Monochromaton, and is still retained, in modern times, under the appellation of *cammeo.* For this improvement the Roman historian presents us with two competitors also, without deciding on the superiority of their pretensions;—Philocles, whom he asserts to have

Dextera ea propter nobis simulacra remittunt:
Aut quia de speculo in speculum transfertur imago,
Inde ad nos, elisa bis, advolat; aut etiam quod
Circum agitur, quom venit imago: propterea quod
Flexa figura docet speculi convortier ad nos.

Indugredi porro pariter simulacra, pedemque
Ponere, nobiscum credas, gestumque imitari;
Propterea, quia, de speculi quâ parte recedas,

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been of Egypt, and Cleanthes of Corinth. This seems to have been a great improvement upon the style of stroke or linear drawing; for although the former may have been founded upon an observation of the effects of light and shade, and an attempt to introduce such effects upon paper, yet, every attempt must, in the first instance, and by the use of strokes alone, have been harsh and inharmonious; it must have wanted relief, and been incapable of exhibiting the gradual softness, recession, and rotundity which are every where to be met with in nature. This alone is to be obtained, in any high degree, by the introduction of colour,—although that colour be, as in the present instance, a monochrome, or simple individual hue, diversified, as we must naturally suppose it to have been, by the gradual admixture of some other substance which, without presenting any second hue, would progressively modulate its tones: as when black, for example, is the only tint resorted to, and its different shades are produced by different combinations of white. It is to these melodious combinations of tints, apparently opposite, in which the black alone maintains the supremacy, that the Italians have given the name of *chiaro-scuro*, or *clear obscure*. From this advantage gained to the art, it is easy to trace its ascent to the life and harmony of colouring properly so called—to the æras of Panænus, Polygnotus, and Zeuxis—to the exquisite paintings of the Pœcile—and the meridian age of Apelles, who, in the language of Cicero, consummated this noble invention—"*jam perfecta*," said he, "*sunt omnia*." To draw a comparison between these and others of equal celebrity, and the painters of modern times, would be as invidious as foreign to the plan I have prescribed to myself. It is enough to observe, that their excellence has been admitted, to its utmost extent, by Raphäel and Poussin; and we cannot err in applauding them after such antecedent panegyrics.

Upon the subjects of Grecian statuary and engraving, so nearly connected with painting, I have not space to enter. The perfection of the former art may be fully appreciated from the precious reliques which have descended to our own days; and that of the latter, from the description of the shields of their heroes as presented to us by their poets. But I ought not to forbear noticing, that amidst many other proofs of their ingenuity, which are totally lost to us, is to be enumerated their mode of encaustic painting as well in wax as on ivory. Of the inventors of these very curious arts we know nothing.—The style of painting in wax was in common use at least as early as the age of Anacreon, who, as the friend of Polycrates of Samos, must have flourished upwards of five hundred years anterior to the Christian æra; for he expressly mentions it in several places, and particularly in Ode xxviii. in which he gives his directions to the painter, who was taking a likeness of his mistress.

To right or left each object free from change.
Thus solve the problem that the convex plate,
Like a twin mirror, twice the scene reflects
Ere yet it touch the vision; or, perchance,
Th' approaching image turns completely round,
A turn the flexile splendour proves precise.—
Then the light image, too, with us affects
To move responsive, every gesture caught.
Hence the deception, that whate'er the part

Απιχει· βλεπω γαρ αυτην·
Ταχα κηρε, και λαλησεις.

Enough—'tis she—her air, her cheek—
O Wax! thou soon wilt learn to speak.

There was also another mode of employing wax in ship-painting, which was obviously invented for the sake of duration, but which is equally lost to us. The little with which we are acquainted of these different methods is preserved by Pliny in the following passage, xi. 41: *Encausto pingendi duo fuisse antiquitus genera constat, cerâ et in ebore, cestro, id est, verniculo; donec classes pingi cœpere. Hoc tertium accessit, resolutis igni ceris penicillo utendi; quæ pictura in navibus nec sole, nec sale, ventisque corrumpitur.* "There were formerly two modes of painting in encaustic, with wax, and on ivory, by the use of a cestrum, or graver, till, at length, ships began to be painted. A third mode was then invented, which consisted in employing a pencil brush with wax dissolved over a fire; which produced a painting for vessels that was never injured by the sun, the sea-water, or the winds." The passage is by no means perspicuous; and Pliny, who was no painter himself, does not appear to have been in the secret in either case. All we can collect is, that every mode was alike encaustic, or corrosive by means of fire: that, in the two former, a cestrum or pointed graver was employed; and, in the latter, a pencil-brush. M. Levesque observes, therefore, as has been observed also by M. Scheffer, (Graphice, par. 16.) that the painting upon ivory was less properly a painting than an engraving, the point of the graver being heated in the fire to a red heat—that the lines were of one colour alone, and this a black or a tawny. I know not, however, what reason these writers have for limiting the encaustic painting on ivory to any individual colour: those in wax, most assuredly, comprehended every kind and combination of colour; for, in the ode of Anacreon above referred to, he makes express mention of black, white, blue, and red: and as the instrument employed in both these modes was the same, as they were both effected by a similar process of fire, and as Pliny does not inform us that there was any difference in the application of the instrument, we may as readily suppose that the encaustic on ivory admitted the introduction of different colours, as the encaustic in wax. M. le Compte de Caylus imagined he had recovered the Grecian mode of encaustic ship-painting a few years ago: but his method, though ingenious, is rather a new invention than a revival of that spoken of by Pliny: in the language of M. Levesque, it is an ustion rather than an inustion; καυσις, but not εγκαυσις. For farther proofs of the mechanical ingenuity of the ancients, the reader may turn to Notes on v. 924. and 1046. of the present Book; as also to the Note on Book V. v. 1304.

Continuo nequeant illinc simulacra revorti:
Omnia quandoquidem cogit natura referri,
Ac resilire ab rebus, ad æquos reddita flexus.

Splendida porro oculei fugitant, vitantque tueri;
Sol etiam cæcat, contra si tendere pergas:
Propterea, quia vis magna est ipsius, et alte
Aëra per purum graviter simulacra feruntur,
Et feriunt oculos, turbantia conposituras.
Præterea, splendor, quiquomque est acer, adurit
Sæpe oculos; ideo, quod semina possidet ignis
Multa, dolorem oculis quæ gignunt insinuando.

Lurida præterea fiunt, quæquomque tuentur
Arquatei; quia luroris de corpore eorum

Ver. 342. ——*Mark we next,*
How hates the eye-ball every gaudy glare;] Our philosophic poet, having selected a few of the more extraordinary problems relative to mirrors, proceeds to another optical phænomenon which, at first sight, should seem self-contradictory. Whence, he inquires, results it, that the organ of vision becomes injured by an exposure to glaring objects, and that darkness, and even blindness itself, is produced by excess of light? In the latter part of the solution of this query, he appears to have a particular reference to Democritus, the founder of the atomic school, who purposely blinded himself by the method here pointed out, that the obtrusion of external objects on the pupil might not discompose him in the prosecution of philosophic pursuits. The fact is described by Laberius, in the following tetrastich, as preserved by Aulus Gellius, x. 17.

Democritus, Abderites, physicus, philosophus,
Clypeum constituit contra exortum Hyperionis,
Oculos ut possit effodere, splendore æreo.
Ita radiis solis aciem effodit luminis.

Democritus, the Abderite renown'd,
Against the rising sun, in full array
Planted his shield, whose glare his sight might wound:
Whence sightless grew he from the darts of day.

Milton, though not guilty of the same self-barbarity, appears to have hoped for the same advantage from his blindness: whence, in his well-known address to Light, we meet with the following verses:

Thus, with the year,
Seasons return; but not to me returns
Day, or the sweet approach of ev'n or morn,
Or sight of vernal bloom, or summer's rose,

Of the pure plate relinquish'd, thence no more
Flies the fleet semblance; fate's eternal laws
Deciding ceaseless that the film propell'd
Must bear each variance of the parent form.
  Such are the sleights of mirrors. Mark we next,
How hates the eye-ball every gaudy glare;
How darkens in the sun when pour'd direct;
Such his vast power. Yet here that power alike
Flows from a stream of effigies through heaven
Impetuous flung, the tender pupil oft
Wounding severely; and, at times, so fierce
Rushes the radiant tide, the total orb
Burns with the fiery particles contain'd.
  The jaundic'd thus, not unaccordant, see
All clad in yellow, many a yellow seed

Or flocks, or herds, or human face divine.—
So much the rather thou, celestial Light!
Shine inward, and the mind through all her powers
Irradiate; there plant eyes, all mist from thence
Purge and disperse, that I may see and tell
Of things invisible to mortal sight.
PAR. LOST, III. 40.

The temporary darkness which results from an excess of radiance poured directly on the pupil, is well known to proceed from a violent and spasmodic contraction of the iris: and Klopstock, in allusion to it, has, hence, with a boldness of imagery seldom to be indulged without blame, denominated the brilliance of the cloud of glory which shone over the Holy of Holies in the temple of Solomon, on its dedication, and from which the priests, appointed to minister on the solemn occasion, were obliged to retreat, "a *night of brightness*,"— *nacht der erscheinungen.* Mess. Ges. iv.

Ver. 351. *The jaundic'd thus, not unaccordant, see*
All clad in yellow,——] The explanation is extremely apposite, and, upon the Epicurean system of effluvia, highly ingenious. Our poet enumerates two causes of the lurid or yellow appearance of objects to persons afflicted with the jaundice. The first is that, from the predominant secretion of the seeds or particles of yellow communicated to the whole frame, the stream or effluvium which the body is perpetually ejecting must necessarily be coloured with the same tincture; and, consequently, tinge, in the course of its radiation, the images it meets with in their approach to the eye from surrounding objects, with some portion of its predomi-

Semina multa fluunt, simulacris obvia rerum;
Multaque sunt oculis in eorum denique mixta,
Quæ contage suâ palloribus omnia pingunt.

E tenebris autem, quæ sunt in luce, tuemur,
Propterea, quia, quom propior caliginis aër
Ater iniit oculos prior, et possedit apertos;
Insequitur candens confestim lucidus aër,
Qui quasi purgat eos, ac nigras discutit umbras
Aëris illius: nam multis partibus hicc' est
Mobilior, multisque minutior, et mage pollens.
Qui simul atque vias oculorum luce replevit,
Atque patefecit, quas ante obsederat ater;
Continuo rerum simulacra adaperta sequuntur,
Quæ sita sunt in luce, lacessuntque, ut videamus.
Quod contra facere in tenebris e luce nequimus;
Propterea, quia posterior caliginis aër
Crassior insequitur, qui cuncta foramina conplet,
Obsiditque vias oculorum, ne simulacra

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nant hue: and the second, that the crystalline of the eye itself, like every other organ and member of the body, must partake of the yellow or bilious principle, and, of course, communicate the image to the retina through a coloured medium. The latter part of this reasoning is retained in the schools of medicine to the present day: and it is by no means improbable that the tinge of the skin itself may, also, communicate some degree of yellowness to the substances upon which it is reflected; in the same manner, as our poet has justly observed, that the shadowy drapery suspended over the Roman theatres, when undulated by the external breeze, reflected its splendid dye upon the audience and scenery below. See Note on v. 77. of this Book.

Ver. 357. *Things in the light, though in the dark ourselves,*] The poet here advances another problem, to the following effect:—Why, when we are in the dark, can we see objects that are beyond

Forc'd from their frames, the semblances of things
Accosting frequent; and the lurid eye,
Deep, too, imbued with its contagious hue,
Painting each image that its disc assails.
Things in the light, though in the dark ourselves,
We mark conspicuous; for as the black air
Adjoining, first usurps th' expanded eye,
Quick flows th' illumin'd tide, from every shade
Purging the pupil, form'd of finer seeds,
More potent far, more voluble in act.
Hence as at once the visual orb it clears,
Till then obstructed, and with lustre fills,
Each floating image, in the light exhal'd,
Next rushes, and its stimulus applies.
But when, revers'd, from day to dark we look,
We see not, for the stream of shadowy air
That last arrives, of grosser texture wrought,
Fills every avenue, each optic nerve

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us in the light; while, if we ourselves be in the light, we cannot see objects that are in the dark? With respect to the order in which the image and "the stream of shadowy air" reach and strike upon the pupil, see v. 320. of this Book. The solution of the problem here proposed, is far more easy, and infinitely more satisfactory upon the Newtonian theory. Substances that are in the light, even though that light be small, must necessarily reflect on every side the luminous current that impinges upon their atmospheres: the reflected and diverging rays of which current are concentrated by the crystalline lens of the eye, when directed towards them; whence, having passed through its axis, they communicate their image to the retina. But from substances that are actually in the dark, that is to say, in situations where no current of light can reach and impinge against them, there can be no reflection of such current, of course no image, and consequently no vision.

Possint ullarum rerum, contecta, moveri.
Quadratasque procul turreis quom cernimus urbis,
Propterea fit, utei videantur sæpe rotundæ,
Angulus obtusus quia longe cernitur omnis
Sive etiam potius non cernitur, ac perit ejus
Plaga, nec ad nostras acies perlabitur ictus;
Aëra per multum quia dum simulacra feruntur,
Cogit hebescere eum crebris obfensibus aër.
Hoc, ubi subfugit sensum simul angulus omnis,
Fit, quasi ut ad tornum saxorum structa tuantur:
Non tamen, ut coram quæ sunt, vereque rotunda;
Sed quasi adumbratim paullum similata videntur.
Umbra videtur item nobis in sole moveri,
Et vestigia nostra sequi, gestumque imitari;
Aëra si credis, privatum lumine, posse
Indugredi, motus hominum, gestumque, sequentem:
Nam nihil esse potest aliud, nisi lumine cassus
Aër, id, quod nos umbram perhibere suëmus.
Nimirum, quia terra locis ex ordine certis

Ver. 372. *View yon square turrets, too, that guard our state*] The explanation of this additional problem is extremely ingenious, upon the principles of the theory contended for in the poem. The example adduced is thus copied, but inversely, by Petronius:

Fallant nos oculi, vagique sensus
Oppressâ ratione mentiuntur:
Nam turrris, prope quæ quadrata surgit,
Attritis procul angulis rotatur.
Our vision cheats us, and each rambling sense
Lies, when the mind by abject chains is bound:
The tower that square we find when near us, hence
With softening angles, seems, at distance, round.

In like manner, Polignac:

——oculi referunt persæpe rotundum
Quod re quadratum verâ.
Cum propius venere tamen, sese explicat error.
Anti-Lucr. VI. 350.

Clogs, and the semblances of things arrests.
View yon square turrets, too, that guard our state
From hills remote, and each appears rotund.
Hence solve the vision; that, at distance seen,
All angles soften; first survey'd obtuse,
Then fading total; the dilated orb
Attaining never, or devoid of force:
For the light image, through the flutt'ring air
As swift it glides, abrades at every point.
Hence, as each angle flies the prying sight,
Cylindric seems the structure, distant far
From the true circle, but cylindric still.
The shade, moreo'er, moves with us in the sun,
Attends our steps, and every gesture apes;
Moves, or so seems, if terms like these apply
To aught like shadow, the mere void alone
Of light, and lustre. Such the phase evinc'd,
Thou thus resolve it; that, whene'er we walk

Oft *round the sight deems what in truth is square:*
An error soon corrected by approach.

Ver. 386. ——*the mere void alone*
Of light, and lustre.——] The doctrine here advanced upon shadows is perfectly consentaneous to the philosophy of the present day, and the solution of the problem adduced is as applicable to the theory of Newton as of Epicurus: the former of whom, in describing the laws of the projection of shadows from opake bodies, tells us expressly, that shadow is the mere privation of light; and that as every opake body projects a shadow in the same direction with the rays of light, that is, towards the part opposite the light, as the luminary or the projecting body changes place, the shadow must necessarily change place in the same proportion.

Lumine privatur solis, quaquomque meantes
Obficimus: repletur item, quod liquimus ejus.
Propterea fit, utei videatur, quæ fuit umbra
Corporis, e regione eadem nos usque sequuta:
Semper enim nova se radiorum lumina fundunt,
Primaque dispereunt, quasi in ignem lana trahatur.
Propterea, facile et spoliatur lumine terra,
Et repletur item, nigrasque sibi abluit umbras.

Nec tamen heic oculos falli concedimus hilum:
Nam, quoquomque loco sit lux, atque umbra, tueri
Illorum est: eadem vero sint lumina, necne,
Umbraque, quæ fuit heic, eadem nunc transeat illuc;
An potius fiat, paullo quod diximus ante;
Hocc' animi demum ratio discernere debet,

Ver. 396. *Die instant, as the filaments of wool*
In fiercest flames,——] Nothing can be more beautiful or appropriate than the image here introduced; and yet few of the commentators of Lucretius, and not one of his translators, have understood his meaning. Hence Creech, in his English version, has omitted it altogether; and Nardius and Scaliger have attempted to amend it by fanciful variations of their own, the former reading *margine*, and the latter *carmine* (the wool-instrument called a *card*) for *in igne*.

The simile is altogether Hebraic; or, at least, I am not acquainted with any other quarter from which it could be derived. On which subject see the Preface, p. xv. To the Hebrew writers it is common, and appears to have been a favourite image amongst them.

Thus, Judges, xvi. 9. "And he brake the withs, as a *thread of tow is broken when it approacheth the fire.*" Whence, perhaps, Isaiah, ii. 31:

And the strong shall be as *tow*, and the maker of it as a *spark*;

Beneath the solar blaze aslant propell'd,
Our interposing limbs perforce must hide
The heavenly ray from spots illumin'd else,
And still illum'd the moment we forsake:
Hence must the shadow with the moving frame
Seem, too, to move most punctual; for the streams
Of new-born radiance that for ever flow
Die instant, as the filaments of wool
In fiercest flames, by streams succeeded still:
Whence quick of light may every spot be robb'd,
And quick relum'd, the negro shade expell'd.
Yet deem not thou from this, or aught besides,
The vision e'er can err: its office sole
Tells where is shine or shadow, while the rest,
Whether the shining current live the same,
Or change perpetual; whether the dark shade
Wait on each step progressive, or the dogm
Just urg'd be truth,—all this the mind alone

And *they shall both burn together*, and shall not be quenched.

So, again, xliii. 17:

They shall lie down together; they shall not rise:
They are extinct, *they are consum'd as tow.*

It is rather, perhaps, from the sacred writers than from Lucretius that the simile is thus copied by Cowper:

Man does not feel for man; the natural bond
Of brotherhood is sever'd *as the flax*
That falls asunder at the touch of fire. Task, ii. 9.

Ver. 400. *Yet deem not thou from this, or aught besides,*

The vision e'er can err:——] According to the philosophy of Epicurus, as I have already had occasion to observe in the Note on Book I. v. 471. the senses never err in the evidence they deliver to the mind: and hence, whatever error occurs, it proceeds from a mistaken judgment of the mind itself: on which subject our poet expatiates still more at large in v. 488. and following, of the present Book.

Nec possunt oculei naturam noscere rerum.
Proinde, animi vitium hocc' oculis adfingere noli.

Quâ vehimur navi, fertur, quom stare videtur;
Quæ manet in statione, ea præter creditur ire:
Et fugere ad puppim colles, campeique, videntur,
Quos agimus præter navem, velisque volamus.
Sidera cessare, ætheriis adfixa cavernis,
Cuncta videntur; et adsiduo sunt omnia motu;
Quandoquidem longos obitus exorta revisunt,
Quom permensa suo sunt cœlum corpore claro:
Solque pari ratione manere, et luna, videtur
In statione; ea, quæ ferri res indicat ipsa.
Exstantesque procul medio de gurgite montes,
Classibus inter quos liber patet exitus; ingens
Insula conjunctis tamen ex hiis una videtur.
Atria vorsari, et circumcursare columnæ,
Usque adeo fit utei pueris videantur, ubi ipsei
Desierunt vorti, vix ut jam credere possint,
Non supra sese ruere omnia tecta minari.
Jamque rubrum tremulis jubar ignibus erigere alte

Ver 411. *Th' advancing bark seems to the crew at rest;*
At rest, advancing;——] Thus, Cicero, as Mr. Wakefield observes, Acad. ii. 25: Videsne navem illam? Stare nobis videtur, at iis, qui in navi sunt, moveri hæc villa. "Do you perceive yonder vessel? This villa which to us seems to be at rest, to those who are in that vessel appears to be moving." For the modern solution of this problem upon the principle of dioptrics or refraction, see Note on v. 144. of the present Book.

Weighs, and determines; for th' exterior sight
Scans not the powers of things; so blame not thou
Th' unerring vision for the mind's defects.
Th' advancing bark seems to the crew at rest;
At rest, advancing; and the hills and vales,
Near which we voyage, seem compell'd astern.

Thus seem the stars, though reason proves their flight,
Fixt to th' etherial vault, o'er whose broad bounds
Their lucid course they steer, and rise and set
Alternate; thus the sun, and moon alike
Move not to sight though moving without end.

The mountain rocks whose sever'd sides admit
Whole fleets between, look in the distant deep,
But one continuous chain, one solid isle.
So to the wanton boy, whom many a twirl
Makes dizzy, pillars, pictures, walls alike
Roll rapid round, and menace with their fall.

When first the rosy dawn, with trembling fires,

Ver. 420. *But one continuous chain, one solid isle.*] In all the common editions, we meet with the following interpolated verse, marked by Italics, and generally numbered v. 400.

Classibus inter quos liber patet exitus *idem*
Apparent, et longe divolsi licet, ingens
Insula conjunctis tamen ex hiis una videtur.

The middle of these three verses, or that designated by Italics, is not to be traced in any of the best authenticated copies; it contains a conceit unworthy of Lucretius, and is totally redundant and unnecessary: and Mr. Wakefield has hence judiciously omitted it in his edition.

Quom cœptat Natura, supraque extollere monteis;
Quos tibi tum supra sol monteis esse videtur,
Conminus ipse suo contingens fervidus igni,
Vix absunt nobis missus bis mile sagittæ;
Vix etiam cursus quingentos sæpe veruti.
Inter eos, solemque jacent inmania ponti
Æquora, substrata ætheriis ingentibus oris:
Interjectaque sunt terrarum milia multa,
Quæ variæ retinent gentes, et secla ferarum.
At conjectus aquæ, digitum non altior unum,
Qui lapides inter sistit, per strata viarum,
Despectum præbet sub terras inpete tanto,
A terris quantum cœli patet altus hiatus;
Nubila despicere, et cœlum: ut videare videre
Corpora mirande sub terras, abdita cœlo.
Denique, ubi in medio nobis equus acer obhæsit
Flumine, et in rapidas amnis dispeximus undas;
Stantis equi corpus transvorsum ferre videtur
Vis, et in advorsum flumen contrudere raptim:
Et, quoquomque oculos trajecimus, omnia ferri,
Et fluere, adsimili nobis ratione videntur.
Porticus æquali quam vis est denique ductu,

Ver. 438. ——*in wond'rous guise display'd.*] This verse, and that which precedes it, are thus expressed in the common editions, ver. 420,—421:

Nubila despicere, et cœlum: ut videare videre, *et*
Corpore *mirando* sub terras abdita cœlo.

This lection I have relinquished for that in the text, which appears to me the clearest, and combines

Peeps o'er the mountains, mountains where the sun
Rests all his rising radiance,—the bright pomp
Seems scarce two thousand bow-shots from ourselves;
Oft might five hundred reach it: yet between
These rich-wrought mountains, and the solar disc
Spreads many an ocean, many a heaven unknown,
Of span immense, and many a mighty realm
Peopled with nations, and the brutal tribes.
So in the puny pools inch-high that fill,
When show'rs descend, the hollows in our streets,
A prospect opens, earth as deep below
As bends o'er earth th' etherial vault sublime:
Where may'st thou trace the flitting clouds, the heav'ns,
And heavenly orbs in wondrous guise display'd.

Thus, too, when mounted on the mettled steed,
Full in the stream then plunge,—if midway o'er
Thou rest—the stationary steed seems still
With the broad torrent struggling, up the tide
Urging his dauntless chest, while all around
With equal motion looks alike o'erpower'd.
The pillar'd portico, whose aisle throughout

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a new and beautiful idea beyond what the common editions propose to us. Lambinus, but without any authority, suspects the entire distich to be spurious and interstitial; and Bentley, according to the manuscript in the hands of the editor whom I have followed, varied them thus:

Nubila despicere, et cœlum ut videare videre, *et*
Corpora, *mirandum!* sub terras abdita *retro.*

Stansque in perpetuum paribus subfulta columnis,
Longa, tamen parte ab summâ quom tota videtur,
Paullatim trahit angusti fastigia coni,
Tecta solo jungens, atque omnia dextera lævis;
Donec in obscurum coni conduxit acumen.
In pelago nautis, ex undis ortus, in undis
Sol fit utei videatur obire, et condere lumen;
Quippe ubi nihil aliud nisi aquam cœlumque tuentur:
Ne leviter credas labefactari undique sensus.
At maris ignaris in portu clauda videntur
Navigia aplustris, fractas obnitier undas:
Nam quæquomque supra rorem salis edita pars est
Remorum, recta est; et recta superne guberna:
Quæ demersa liquore obeunt, refracta, videntur
Omnia convorti, sursumque supina revorti;
Et reflexa prope in summo fluitare liquore.
Raraque per cœlum tum ventei nubila portant
Tempore nocturno, quom splendida signa videntur
Labier advorsum nimbos, atque ire superne
Longe aliam in partem, ac quâ, ratione, feruntur.

Ver. 461. *Invers'd, and floating near the rory brim.*—] The reasoning of Lucretius is warmly espoused by Macrobius; and he has copied into his argument, in favour of the certainty of the senses, both the present instance, and that of the polygon tower, v. 372. Hâc (ratione videlicet) cessante, visus inefficax est: adeo ut quod remus in aquâ fractus videtur, vel quod turris eminus visa, cum sit angulosa, rotunda existimatur, faciat rationis negligentia; quæ, si se intenderit, agnoscit in turre angulos, et in remo integritatem; et omnia illa discernit, quæ Academicis damnandorum sensuum occasionem dederunt: cum sensus unus inter certissimas res habendus sit, comitante ratione. Saturnal, vii. 14. "When reason is inattentive, the sense of sight is useless; so that the oar, when beneath the

In breadth ne'er varies, propt through all its course
With equal columns, from its entrance view'd
Seems lessening gradual, side approaching side
And ceiling floor, till at its utmost bound
All, like the cone, ends in a point acute.
To those at sea the restless sun ascends,
And sets in ocean, quenching there his fires;
For nought but skies, and ocean meet their view:
So blame not thou that thus the sight reports.
E'en while in port the bark, to those unskill'd,
Oft seems distrest, and with disabled arms
Against the tide contending: for though straight
Looks the tough length of oar the brine above,
And straight the helm superior, all below
Seems broke abrupt, refracted by the wave,
Invers'd, and floating near the rory brim.—
When through the welkin the wild winds at night
Drive the light clouds, the starry gems of heaven
Seem forc'd athwart them, in perplext career
Urg'd rapid on, wide wand'ring from their paths.

surface of the water, appears broken; and a tower seen at a distance, although, in reality, angular, is conceived to be round. Reason is, in these cases, negligent in the performance of her office: to which, were she strictly attentive, she would perceive the angles in the tower, and the soundness in the oar; and would discern all those phænomena as they really exist, which allow the Academicians an opportunity of impeaching the senses: for the senses, even with the assent of our reason itself, are to be enumerated among those things that are most to be depended on." See Note on v. 144. of the Book before us.

At, si forte oculo manus uni subdita subter
Pressit eum, quodam sensu fit, utei videantur
Omnia, quæ tuimur, fieri tum bina tuundo;
Bina lucernarum florentia lumina flammis,
Binaque per totas ædeis geminare supellex;
Et duplices hominum facies, et corpora bina.
Denique, quom suavi devinxit membra sopore
Somnus, et in summâ corpus jacet omne quiete;
Tum vigilare tamen nobis, ac membra movere
Nostra videntur; et in noctis caligine cæcâ
Cernere censemus solem, lumenque diurnum:
Conclusoque loco cœlum, mare, flumina, monteis,
Mutare, et campos pedibus transire, videmur;
Et sonitus audire, severa silentia noctis
Undique quom constent; et reddere dicta tacentes.
Cætera de genere hoc mirande multa videmus,
Quæ violare fidem quasi sensibus omnia quærunt:
Nequidquam; quoniam pars horum maxima fallit
Propter opinatus animi, quos addimus ipsei,
Pro visis ut sint, quæ non sunt sensibus visa.

Ver. 468. *Looks instant double; every taper flames*
With double lights,——]

Not widely different from the following of Thomson:

——Before their maudlin eyes
Seen dim and blue, the double tapers dance.
Seasons, iii. 554.

Ver. 481. *These, and a thousand visions, strange alike,*
Assault our senses, and would fain deceive.]

The poet has laboured strenuously, and by the introduction of a variety of pertinent and beautiful examples to prove that mental error is in no instance to be attributed to the external senses, when in a state

If but one eye-ball lightly thou compress
Below, with casual finger, all around
Looks instant double; every taper flames
With double lights, with double garniture
The mansion labours, and each friend assumes,
Prepost'rous sight! two faces, and two forms.
So, too, when sleep his opiate wand has stretch'd
And lull'd each limb in soft, and sound repose,
Still watchful seem we, every member still
Feels in full motion: wrapt in midnight gloom
The cheerful day still smiles: though close pent up,
O'er main, and mountains, hills and heav'ns we roam,
Tread with firm foot the champain; grave debates
Hear mid the noiseless solitude that reigns,
And e'en while silent loudly make reply.
These, and a thousand visions, strange alike,
Assault our senses, and would fain deceive.
But vain th' attempt: since, though full oft we err,
'Tis mind misguides us with results unsound,
That deeming seen which ne'er the sight surveys.

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of sanity, but to the immature or biassed judgment of the mind itself:

'Tis mind misguides us with results unsound
That deeming seen which ne'er the sight surveys.

This dogma was at all times esteemed of the highest consequence in the system of Epicurus, and has, therefore, been frequently adverted to before. See v. 400. of the present Book, and Book I. v. 471. Upon this doctrine we have the declaration of Epicurus himself, as contained in his Epistle to Herodotus: Και παντα μεν φαντασια εστι διανοια, εστι αισθησει καταλαμβανομενη, ου μεν τοι διαλαμβανομενη, ισται αληθης, &c. The opinion of our own immortal Locke upon this entire subject of external sensation as a source of invariable knowledge, coalesces most completely with that of the Epicurean school.

Nam nihil ægrius est, quam res secernere apertas
Ab dubiis, animus quas ab se protinus abdit.
Denique, nihil sciri si quis putat, id quoque nescit,
An sciri possit; quoniam nihil scire fatetur.
Hunc igitur contra mittam contendere caussam,
Qui capite ipse suo in statuit vestigia sese.

Ver. 486. *For nought more arduous than to sever forms*
True, from ideal by the mind begot.] In the translation of these verses I have followed the Leyden manuscript of Is. Vossius, in which the distich is thus written:

Nam nihil *ægrius* est quam res secernere apertas
Ab dubiis, animus *quas ab se protinus addit:*

"which the mind adds immediately from itself, or its own powers."

But the readings are extremely various, and confused in different editions and codices. For *ægrius* we generally meet with *egregius*; and very often for *addit, abdit:* which latter variation the reader will perceive has been preferred by Mr. Wakefield, and of course occurs in the Latin text before us, the integrity of which I have not chosen to depart from. By Lambinus, and many other critics, the entire distich, however, is regarded as spurious and supernumerary: Marchetti and Creech have equally rejected it; and Guernier and Des Coutures, who retain it, have given so ambiguous an interpretation, as to render the paraphrase more difficult than the text.

Ver. 487. *Who holds that nought is known, denies he knows*
E'en this, thus owning that he nothing knows.] There is a logical precision and beauty in the whole of this argument that has seldom been equalled by any dialectic writer in prose: and it is astonishing how very nearly Mr. Locke has adopted the same words in his discussion of the same subject. "I think nobody can in earnest," says he, "be so sceptical as to be uncertain of the existence of those things which he sees and feels. *At least, he that can doubt so far will never have any controversy with me, since he can never be* SURE *I say any thing contrary to his opinion.*—But yet, if, after all this, any one will be so sceptical as to distrust his senses, and to affirm that all we see and hear, feel and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, whereof there is no reality; and, therefore, will question the existence of all things, or our knowledge of any thing; I must desire him to consider, *that if all be a dream, then he does but dream who makes the question;* and so it is not much matter that a waking man should answer him. But yet, if he pleases, he may dream that I make him this answer: that the certainty of things existing IN RERUM NATURA, *when we have the testimony of our senses for it,* is not only as great as our frame can attain to, but as our condition needs." Hum. Unders. iv. xi. 3. 8.

The poet is here, as Lactantius informs us, more immediately directing his attack against that sect of the academic philosophists which was established by Arcesilas; who denied the evidence of their senses, and contended, that nothing was positively known, and that nothing could positively be known. The argument of Lucretius overthrows the whole of this sophistry at the first attack; for, if nothing can be known, "how," says he, "do you know this tenet?" Cicero has also attacked this school of absurd and delirious professors, and with a chain of argument drawn from this very passage of Lucretius. Metrod. Nego scire nos, sciamus ne aliquid an nihil sciamus, &c.

It would be difficult to conceive that such a creed could have been propagated to any extent, or so con-

For nought more arduous than to sever forms
True, from ideal by the mind begot.
Who holds that nought is known, denies he knows
E'en this, thus owning that he nothing knows.
With such I ne'er could reason, who, with face
Retorted, treads the ground just trod before.

fidently urged as to attract the attention of men of real science, if we were not witnesses of the very same fact in modern times. Thus, the system of Berkeley lies under a like imputation of questioning the knowledge of the senses,—because, by one bold position, it denies the existence of the external world, and, consequently, allows the senses nothing to exercise their knowledge upon. But the system of Hume is still more dangerous, in as much as it is more perplexed and complicated; for, while it admits the knowledge of the senses, it contends, that this knowledge is at all times imperfect, and, in many instances, not at all to be depended upon. A tenet, indeed, which he applies, with no small degree of dexterity, to undermine the existence of our Saviour's miracles, and to prove, that the apostles were deceived by their senses while in the very act of beholding such miracles performed. To every sophism of this description, and to all the farrago of absurd opinions which are built upon such external delusions, by the sceptical philosophists with which the present day abounds,—the truly logical and legitimate chain of argument before us offers a complete refutation; and, consequently, cannot be too highly valued.

Ver. 489. ——*thus owning that he nothing knows.*] Butler thus ludicrously alludes to the sect here described in his Hudibras:

—those Athenian sceptic owls
That will not credit their own souls;
But measuring all things by their own
Knowledge, hold nothing's to be known.
P. II. iii. 803.

The corresponding verses in the original occur thus:

Denique, nihil sciri si quis putat, id quoque nescit,
An sciri possit; quoniam nihil scire fatetur.
Ver. 471.

Our poet's contemporary and friend, Catullus, may, possibly, from this couplet, have derived the following:

Ipse quis scit, utrum sit, an non sit, id quoque nescit:

a verse, however, which Longepierre is rather disposed to refer to the ensuing of Anacreon, in an Ode beginning Αιγοισιν αι γυναικες:

Εγω δε τας κομας μεν
Ειτ' εισιν, ειτ' απωλθον
Ουκ' οιδα· τουτο δ' οιδα
Ως τω γεροντι μαλλων, &c.

Whether my hairs remain, or whether
My locks have left me altogether,
I know not this; but this I know,
That he whose head is crown'd with snow
Should doubly dance, and play and kiss,
Since death must call him soon from bliss.

Ver. 490. ——*who, with face*
Retorted, treads the ground just trod before.] I have no doubt that Mr. Wakefield has restored the true reading of the original of this passage; and he is justified by a variety of authentic manuscript copies:

Qui capite ipse suo *in statuit* vestigia *sese.*

In all the common editions, we meet with it thus:

Qui capite ipse suo *instituit* vestigia *retro.*

Upon this general reading it is difficult to understand what the poet would intend. Des Coutures

Et tamen hoc quoque utei concedam scire, at id ipsum
Quæram, quom in rebus veri nihil viderit ante,
Unde sciat, quid sit scire, et nescire vicissim:
Notitiam veri quæ res, falsique, crearit;
Et dubium certo quæ res differre probarit.
Invenies primis ab sensibus esse creatam
Notitiam veri, neque sensus posse refelli:
Nam majore fide debet reperirier illud,
Sponte suâ veris quod possit vincere falsa.
Quid majore fide porro, quam sensus, haberi
Debet? an ab sensu falso ratio orta valebit
Dicere eos contra, quæ tota ab sensibus orta est?
Quei nisi sunt verei, ratio quoque falsa fit omnis.
An poterunt oculos aures reprehendere? an aureis
Tactus? an hunc porro tactum sapor arguet oris;
An confutabunt nares, oculeive revincent?
Non, ut opinor, ita est: nam seorsum quoique potestas
Divisa est; sua vis quoique est: ideoque necesse est,

---

has, therefore, ventured upon no interpretation, and Creech has only glanced at the expression paraphrastically: Lambinus, who is extremely fond of excision, would amputate the verse entirely. Faber, however, even in its common lection, imagines it is perfectly perspicuous, and the simile highly elegant: "locus sane," says he, "luculentissimus, et quem vir doctus solicitare non debuerat." Upon his interpretation we find it thus rendered in Guernier: "who perverts all things, and like a tumbler with his head prone to the earth, can go no otherwise than backwards."

Marchetti is the only translator who has hitherto adhered to the manuscript copies from which Mr. Wakefield has deduced his lection:

——disputar contro a costui
Opra vana saria, mentr' *egli stesso*
Co'l suo proprio cervel corre all' indietro.

Ver. 496. *What prove aught doubtful, or of doubt devoid?*] The late worthy, and oftentimes facetious, Cowper, could not refrain from attacking the modern pupils of this academic philosophy whenever an opportunity occurred; and, in his

Yet grant e'en this he knows; since nought exists
Of truth in things, whence learns he what to know,
Or what not know? what things can give him first
The notion crude of what is false, or true?
What prove aught doubtful, or of doubt devoid?
Search, and this earliest notion thou wilt find
Of truth and falsehood from the senses drawn,
Nor aught can e'er refute them: for what once,
By truths oppos'd, their falsehood can detect,
Must claim a trust far ampler than themselves.
Yet what than these an ampler trust can claim?
Can reason, born forsooth of erring sense,
Impeach those senses whence alone it springs?
And which, if false, itself can ne'er be true.
Can sight correct the ears? can ears the touch?
Or touch the tongue's fine flavour? or, o'er all,
Can smell triumphant rise? absurd the thought.
For every sense a separate function boasts,

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poem on *Conversation*, he has thus meritoriously chastised them:

Howe'er ingenious on his darling theme
A sceptic in philosophy may seem,
Reduc'd to practice, his beloved rule
Would only prove him a consummate fool:
Useless in him alike both brain and speech,
Fate having plac'd all truth above his reach;
His ambiguities his total sum,
He might as well be blind, and deaf, and dumb.

Ver. 497. *Search, and this earliest notion thou wilt find Of truth and falsehood from the senses drawn, Nor aught can e'er refute them:*—] To the same effect Epicurus himself, in Diog. Laert. Κριτηρια αληθειας ειναι τας αισθησεις, ουδ' ειναι δυναμενον αυτας διελεγξαι. "The senses are the criterions of truth, and it is not possible to confute them." And "what," inquires Cicero, "can possibly be perceived if the senses do not report faithfully?" Quid ergo est quod percipi possit, si ne sensus quidem vera nuntiant? Acad. ii. 25.

Et, quod molle sit, et gelidum, fervensve, videri;
Et seorsum varios rerum sentire colores,
Et, quæquomque coloribus sint conjuncta, necesse est.
Seorsus item sapor oris habet vim, seorsus odores
Nascuntur, seorsum sonitus: ideoque necesse est,
Non possint alios aliei convincere sensus.
Nec porro poterunt ipsei reprehendere sese;
Æqua fides quoniam debebit semper haberi:
Proinde, quod in quoque est hiis visum tempore, verum est.
Et, si non poterit ratio dissolvere caussam,
Quur ea, quæ fuerint juxtim quadrata, procul sint
Visa rotunda; tamen præstat rationis egentem
Reddere mendose caussas utriusque figuræ,
Quam manibus manifesta suis emittere quoquam;
Et violare fidem primam, et convellere tota
Fundamenta, quibus nixatur vita, salusque.
Non modo enim ratio ruat omnis, vita quoque ipsa
Concidat ex templo, nisi credere sensibus ausis,
Præcipiteisque locos vitare, et cætera, quæ sint
In genere hoc fugiunda; sequi, contraria quæ sint.

Ver. 515. ——*and hence, too,*
One sense another ne'er can contravene,] An undoubted tenet of Epicurus, and thus exhibited in his reliques preserved by Diogenes: Ουτε ἡ ὁμοιογενης αισθησις ὁμοιογενη διελεγξαι δυναται δια την ισοσθενειαν, ουτε ἡ ανομοιογενης την ανομοιογενη, οὐ γαρ των αυτων κριτικαι, "It is not possible that a definite sense should confute a sense of the like kind with itself, because of the equality of their strength and power: neither can it confute a sense of a kind unlike its own; because

A power prescrib'd; and hence or soft, or hard,
Or hot or cold, to its appropriate sense
Alone appeals. The gaudy train of hues,
With their light shades, appropriate thus alike
Perceive we; tastes appropriate powers possess;
Appropriate, sounds and odours: and hence, too,
One sense another ne'er can contravene,
Nor e'en correct itself; since, every hour,
In every act each claims an equal faith:
So what the senses notice must be true.—
E'en though the mind no real cause could urge
Why what is square when present, when remote
Cylindric seems, 'twere dangerous less t' adopt
A cause unsound, than rashly yield at once
All that we grasp of truth and surety most,
Rend all reliance, and root up, forlorn,
The first, firm principles of life and health.
For not alone fails reason, life itself
Ends instant, if the senses thou disturb;
And dare some dangerous precipice, or aught
Against warn'd equal, spurning what is safe.

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senses of a different kind have no power to judge of each other."

Ver. 522. ——*'twere dangerous less t' adopt*
A cause unsound, than rashly yield at once] But the Epicureans did account for this phænomenon upon their own principles; and, if not satisfactorily, at least, highly ingeniously. The image and explanation are both introduced into v. 372. and following, of this Book.

Illa tibi est igitur verborum copia cassa
Omnis, quæ, contra sensus instructa, parata est.
Denique, ut in fabricâ, si prava est regula prima,
Normaque si fallax rectis regionibus exit,
Et libella aliquâ si ex parti claudicat hilum;
Omnia mendose fieri, atque obstipa, necessum est,
Prava, cubantia, prona, supina, atque absona tecta;
Jam ruere ut quædam videantur velle, ruantque
Prodita judiciis fallacibus omnia primis:
Sic igitur ratio tibi rerum prava, necesse est,
Falsaque sit, falsis quæquomque ab sensibus orta est.
Nunc aliei sensus, quo pacto quisque suam rem
Sentiat, haud quaquam ratio scruposa relicta est.
Principio, auditur sonus, et vox omnis, in aureis
Insinuata suo pepulere ubi corpore sensum.

Ver. 543. Sound, *and the* voice, *then, first are felt when deep*
Pierce their light corpuscles the mazy ear,] Having completed his dissertation on vision, our philosophic bard now proceeds to the discussion of sound. In the explanation of which, as well as of every other external sensation, the same common principles of perception will be found to apply: and this, with respect to the simplicity of the theory, must be acknowledged an advantage which the Epicureans possessed over every other sect that was coëval with itself. Upon the subject of vision, I have already observed, that almost every ancient school differed from that of Epicurus, and principally in conceiving, that the sense of sight, instead of being induced by the assault upon the retina of the radiant effluence of the body surveyed, was formed by the emission of a radiant effluence from the retina itself, impinging upon the object surveyed, and hereby creating a knowledge of its form, and other external qualities. Such was the opinion of Plato, Aristotle, and the Stoics: an opinion which, though long adhered to, and, indeed, not relinquished till about a century and a half ago, gained nothing, in point of information, beyond that of Epicurus, and lost much in point of elegance and simplicity. But the doctrine of effluence, or transmission from an organ of sense, was, by none of the Grecian schools, applied to the solution of any other faculty than that of sight: for, with respect to all the rest, they seem to have coincided entirely in the Epicurean dogma, and to have admitted, that each was excited by the emanation of definite effluvia from definite bodies acting upon the different organs by a peculiar and appropriate stimulus. Plato, indeed,

Hence all against the senses urg'd is vain,
Mere idle rant, and hollow pomp of words.
As, in a building, if the first lines err,
If aught impede the plummet, or the rule
From its just angles deviate but a hair,
The total edifice must rise untrue,
Recumbent, curv'd, o'erhanging, void of grace,
Tumbling, or tumbled from this first defect,
So must all reason prove unsound, deduc'd
From things created, if the senses err.

Thus perfect SIGHT, unfold we next, a task
Not arduous, how each other sense perceives.
SOUND, and the VOICE, then, first are felt when deep
Pierce their light corpuscles the mazy ear,

---

is said to have differed from this common hypothesis in some small degree, and to have approached, in some measure, the system now generally accredited; but this belief of Plato does not fully appear from any of his writings; which, upon the subject before us, are doubtful, and involved in obscurity. With respect to the Stoics, and, indeed, every other sect, they scrupulously coincided with Epicurus, who expressly taught, as we learn, not only from the testimony of Lucretius, but also of Plutarch de Placit. Philos. iv. 19. and Diogenes Laertius, Epist. Epicur. ad Herod., that voice or sound is an effluvium transmitted from sonorous bodies, by whatever means they may be excited, and that this effluvium consists of minute corpuscles of similar configuration; capable, like water, of dividing itself into different drops or portions, while it yet retains its original power: whence the same voice or sound may excite the ears of a multitude of persons at the same time, and in the same manner.

The modern theory of sound differs as much from this system of Epicurus as the modern theory of sight; and, in perfect similarity to the former, is founded on laws peculiar to itself. Like the Grecian hypothesis, it contends for its production from a motion of the superficial corpuscles of the sonorous body: but, unlike that hypothesis, it asserts, that these do not actually fly off from the sonorous body, but only vibrate or undulate at a small distance from each other; and, by such vibration or undulation, communicate a similar motion to the surrounding particles of air; which transfer the same motion, but always with a small degree of diminution, to the adjoining, till, at length, the motion is propagated through the whole column of air that lies between the sonorous body and the auditory organ of the

Corpoream quoque enim vocem constare fatendum est,
Et sonitum; quoniam possunt inpellere sensus.
Propterea radit vox fauces sæpe; facitque
Asperiora foras gradiens arteria clamor.
Quippe, per angustum, turbâ majore coorta,
Ire foras ubi cœperunt primordia vocum
Scilicet, expletis quoque janua redditur oris
Rauca viis; et iter lædit quâ vox it in auras.
Haud igitur dubium, quin voces, verbaque, constent
Corporeis e principiis, ut lædere possint.
Nec te fallit item, quid corporis auferat, et quid
Detrahat ex hominum nervis, ac viribus ipsis,
Perpetuus sermo, nigraï noctis ad umbram
Auroræ perductus ab exoriente nitore;
Præsertim, si cum summo est clamore profusus.
Ergo corpoream vocem constare necesse est,
Multa loquens quoniam amittit de corpore partem.
Asperitas autem vocis fit ab asperitate
Principiorum, et item lævor lævore creatur.

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hearer; which, upon being reached, becomes hereby excited, and faithfully imparts to the mind the sensation of sound, in the same manner that the eye imparts the sensation of light. The proportion of sound communicated depends upon the density of the medium: hydrogen, or inflammable air, conveying it much less perceptibly than atmospheric; and azote, or fixed air, much more so. But, on the density of air depends its elasticity: consequently, where there is no elastic medium, there can be no propagation of sound. For this reason, water, which possesses but a small portion of elasticity, scarcely communicates it in any degree. Yet, even this theory has of late been objected to by Mr. Gough, a philosopher, whose observations are well worth attention: although he does not appear to have substituted the Epicurean or any other system in its stead. See Memoirs of the Literary and Philosophical Society at Manchester, vol. v. part ii.

The auditory organ lately traced in fishes, upon which see Note on Book V. 818. should seem, also, to prove decidedly, that water has a greater power of

And rouse impulsive; for corporeal, too,
Are sound and voice, since each the sense impels.
Thus voice full oft abrades the palate; sound,
Forth issuing from the lungs, th' aerial tube
Roughens: for when the vocal atoms press
With throng unusual through the bronchial straits,
Th' elastic stream their tender tunics goads,
And the whole passage smarts with pain severe.
Hence, doubtless, voice and words sonorous spring
From seeds corporeal, arm'd with power to wound.
Nor here forget how much the speaker wastes,
How faints enervate, shorn of vital force,
Who from the dawn harangues till night's black shade;
How doubly wastes if loud th' oration urg'd.
Corporeal, hence, the voice must prove, since he
Who long debates, corporeal loss sustains.

Roughness, moreo'er, of voice, from atoms rough,
From smooth its suavity perpetual flows:

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transmitting sound than is generally allowed, or accounted for.

Ver. 561. *Roughness, moreo'er, of voice, from atoms rough,*
From smooth its suavity perpetual flows:] These two verses, in the original, are, in many editions, transferred to the situation of 572, 573. of this translation. In this last place they are to be found, in Mr. Wakefield's own edition; and in the versions both of Marchetti and Des Coutures. The change appears to be unnecessary; and, I have, therefore, followed Havercamp, Faber, Creech, and the greater number of the editions, as well as MSS. without admitting the variation, either in the original Latin, or the version. The dogma they contain is consentaneous with the theory illustrated in Book II. v. 413. and following.

Nec simili penetrant aureis primordia formâ,
Quom tuba depresso graviter sub murmure mugit,
Et revocat raucum retro cita barbara bombum;
Et valli cycnis, nece tortis, ex Heliconis
Quom liquidam tollunt lugubri voce querelam.

Hasce igitur penitus voces, quom corpore nostro
Exprimimus, rectoque foras emittimus ore,
Mobilis articulat, verborum dædala, lingua,
Formaturaque labrorum pro parte figurat.

Ver. 564. *When roars the deep-ton'd trumpet, or the horn*] So various are the different lections of the original corresponding to this and the three succeeding verses, that it is impossible to reconcile them. I have chosen that preferred by Wakefield:

Quom tuba depresso graviter sub murmure mugit,
Et revocat raucum *retro cita barbara* bombum;
Et valli cycnis, nece tortis, ex Heliconis
Quom liquidam tollunt lugubri voce querelam.

In the common editions they occur thus:

Quom tuba depresso graviter sub murmure mugit,
Aut roboant raucum *retrocita cornua* bombum:
Vallibus et cycni gelidis orti ex Heliconis
Cum liquidam tollunt lugubri voce querelam.

In many codices they appear in a different form still. Vossius, for *retro cita*, proposes *Berecynthia*, and the proposal was approved by Bentley; yet scarcely nothing, as Wakefield observes, can be more audacious or remote from the semblance of truth.

In the Bolognian collection of Pius, the second verse of the above tetrastich appears thus:

Et *reflexa retro dant cornua* barbara bombum.

In the third verse, the different copies vary still more. Wakefield's is the only one that is both intelligent and metrical; and to render it thus, he has been under the necessity of making one or two literal alterations. For these, however, the admirers of Lucretius must be obliged to him. The translations of these contested lines are, in general, mere paraphrases, particularly the French of des Coutures and the Italian of Marchetti.

Ver. 566. *And when the swan, amid the pangs of death,*
Pours o'er Parnassus *his last liquid dirge.*] Thus imitated by Garcilaso de la Vega, in his Eclogues, who, I have already observed, was fond of this traditionary simile:

Nor of like figure wind they through the ear
When roars the deep-ton'd trumpet, or the horn
With hoarse, harsh gamut strains its serpent throat;
And when the swan, amid the pangs of death,
Pours o'er Parnassus his last, liquid dirge.
The vocal tide thus rear'd, when from the lungs
Sublime we press it through the bronchial duct,
The tongue dædalian, and vivacious lips
Mould it to words, articulated nice.
And when not far th' irruptive voice is thrown
It strikes emphatic, and is heard distinct,
Unchang'd, uninjur'd every primal seed.

——como quando el cisne siente
El ansia postrimera que le aquexa,
Y tienta el cuerpo misero y doliente,
Con triste y lamentable son se quexa,
Y se despide con funesto canto
Del espiritu vital que del se aleja.

Mid the last anguish he sustains,
The swan, through all his dying pains,
Thus tunes his melancholy lay,
And sighs and sings his soul away.

Ver. 570. *The tongue dædalian, and vivacious lips*] In the original, ver. 555:

Mobilis articulat, verborum *dædala*, lingua,
Formaturaque labrorum.

And hence, Polignac:

——*dædala* lingua,
Lingua figuratrix verborum, opifexque loquelæ.
Anti-Lucr. V. 1307.

——the dædalian tongue,
Moulder of words, artificer of speech.

The Hebrew bards, to express the same idea, employ a different image, but one of at least equal elegance and beauty. With them, the lips are represented as the *garden* or *vineyard* in which words are *planted*: and hence speech, or the increase and multiplication of words, is denominated the *fruit of the* lips. Thus, Isaiah, ch. lvii. 19.

בורא ניב שפתים שלום

He that createth THE FRUIT OF THE LIPS saith Peace.

St. Paul has copied the metaphor verbally, in Heb. xiii. 15. and offered the same explanation of it: Δι αυτου ουν αναφερωμεν θυσιαν αινεσεως διαπαντος τω Θεω, τουτεστι, ΚΑΡΠΟΝ ΧΕΙΛΕΩΝ ὁμολογουντων τω ονοματι αυτου. "By him, therefore, let us offer the sacrifice of praise to God continually; that is, the FRUIT OF THE LIPS, giving thanks to his name."

Ver. 587. ——*it rebounds*
In faithless speech, mere semblances of words.] The Epicurean theory of sound is precisely the same

Hoc, ubi non longum spatium est, unde una profecta
Perveniat vox quæque, necesse est verba quoque ipsa
Plane exaudiri, discernique articulatim:
Servat enim formaturam, servatque figuram.
At, si interpositum spatium sit longius æquo,
Aëra per multum confundi verba necesse est,
Et conturbari vocem, dum transvolat auras.
Ergo fit, sonitum ut possis sentire, neque illam
Internoscere, verborum sententia quæ sit;
Usque adeo confusa venit vox, inque pedita.
Præterea, verbum sæpe unum perciet aureis
Omnibus in populo, missum præconis ab ore.
In multas igitur voces vox una repente
Diffugit, in privas quoniam se dividit aureis,
Obsignans formam verbis, clarumque sonorem.
At, quæ pars vocum non aureis incidit ipsas,
Præterlata perit frustra, diffusa per auras:
Pars, solidis adlisa, lapis rejecta, sonorem
Reddit; er interdum frustratur imagine verbi.

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as of sight, in like manner as that of sight is the same as that of sound, as contended for by Malbranche, Euler, and their disciples; hence the echo may, with as much philosophy as poetry, be termed the *semblance* or *image* of speech: like the picture surveyed in the mirror, it is the pure effluvium reflected and thrown back again upon its appropriate organ from a body against which it strikes, and which neither absorbs nor fractures it. The description of the echo, under the phrase "semblances, or images of words", is by no means unfrequent among the poets of Greece and Rome. Thus Archias, in an epigram quoted by Mr. Wakefield, for this purpose:

Παντοιων στοματων χαλον ΕΙΚΟΝΑ

The babbling *semblance* of unnumber'd sounds.

Thus, too, Virgil:

But when at distance urg'd, the sev'ring air
Must break each sentence, and the wandering voice
Through the long medium all connexion lose.
And thus, though sounds attract us, we collect
Nought they should teach, so blended and destroy'd.

When, mid the gaping throng, the cryer loud
Bawls out his mandate, each its purport hears.
Hence, too, the voice to vocicles minute
Severs abrupt, since every ear alike
Drinks in each tone with equal clearness felt;
While what its nerve ne'er reaches, wide diffus'd,
Wastes through all ether; or, if aught, perchance,
Strike some compact enclosure, it rebounds
In faithless speech, mere semblances of words.

——ubi concava *pulsu*
Saxa sonant, *vocisque offensa resultat imago.*
Georg. iv. 49.

Where, mid the hollow rocks the voice rebounds,
Thrown o'er the ear in *semblances of sounds.*

And Horace, not unmindful, perhaps, of Virgil or Lucretius:

——Cujus recinet jocosa
Nomen *imago?*
Aut in umbrosis Heliconis oris,
Aut super Pindo, gelidóve in Hæmo?
Od. I. 12.

Whose name, in sportive *semblance*, now,
O'er shady Helicon shall break?
Proud Pindus echo from his brow,
Or Hæmus, mid his glens, awake?

Quæ, bone! quom videas, rationem reddere possis
Tute tibi, atque aliis, quo pacto, per loca sola,
Saxa pareis formas verborum ex ordine reddant,
Palanteis comites quom, monteis inter opacos,
Quærimus, et magnâ disparsos voce ciemus.
Sex etiam, aut septem, loca vidi reddere voces,
Unam quom jaceres: ita colles collibus ipsei
Verba repulsantes iterabant dicta referri.
Hæc loca capripedes Satyros, Nymphasque, tenere
Finitumei fingunt; et Faunos esse loquuntur,
Quorum noctivago strepitu, ludoque jocanti,
Adfirmant volgo taciturna silentia rumpi;
Chordarumque sonus fieri, dulceisque querelas,
Tibia quas fundit, digitis pulsata canentum:

Ver. 589. *Whence mayst thou solve, ingenuous!*—] In the accompanying Latin text, as well as many of the best manuscripts, ver. 576.

Quæ, *bone!* quom videas——

In all the common editions, however, the spirited adjective *bone!* dwindles into the tame and insignificant adverb *bene:* and the translations have either uniformly followed this latter reading, or omitted the term altogether.

Ver. 594. ——*till the peal*
Ring seven times round:——] Thus copied by Gessner, in his Schweitzer-Idylle. Seine querpfeife rief den siebenfachen Wiederhal aus den felsklüften, und tönte munter durchs thal hin: "His pipe awoke the *seven-fold* echo from the hollow rocks, and shouted merrily amid the vallies."

Ver. 597. *Here haunt the goat-foot satyrs, and the nymphs,*] Thus Martial, in verses exquisitely beautiful:

Sæpe sub hoc madidi luserunt arbore *Fauni*
Terruit et *tacitam fistula sera* domum;
Dumque fugit solos *nocturnum Pana* per agros,
Sæpe sub hac latuit rustica fronde *Dryas*.
IX. lxii. 11.

Beneath this tree oft danc'd the dewy Fauns
And midnight Pan, with pipe that wildly rung;
The lone eot startled:—and, as o'er the lawns
Fled they, from many a shade a Dryad sprung.

And thus our own Akenside, in verses that need not shrink from a comparison with those of Martial:

——haunt belov'd of sylvan powers,

Whence may'st thou solve, ingenuous! to the world
The rise of echoes, form'd in desert scenes,
Mid rocks, and mountains, mocking every sound,
When late we wander through their solemn glooms,
And, with loud voice, some lost companion call.
And oft re-echoes echo till the peal
Ring seven times round: so rock to rock repels
The mimic shout, re-iterated close.
Here haunt the goat-foot satyrs, and the nymphs,
As rustics tell, and fauns whose frolic dance,
And midnight revels oft, they say, are heard
Breaking the noiseless silence; while soft strains
Melodious issue, and the vocal band
Strike to their madrigals the plaintive lyre.
Such, feign they, sees the shepherd, obvious oft,

Of nymphs and fauns! where, in the golden age,
They play'd in secret on the shady brink
With ancient Pan; while round their choral steps
Young hours and genial gales, with constant hand,
Shower'd blossoms, odours, shower'd ambrosial dews,
And springs elysian bloom.
Pleas. of Imag. i. 299.

Ver. 600. —*noiseless silence;*—] In the original, ver. 587.
——taciturna silentia,
a pleonasm altogether allowable in poetry; and the force of which has been imitated both by Virgil and Ovid; vid. Æneid ii. 255. and Ep. ad Liv. 185. Marchetti has translated it, with his usual spirit and accuracy:
——e strepitosi balli
Rompan dell' aer fosco i *taciturni*
Silenzj.

Ver. 603. *Such, feign they, sees the shepherd*—] Thus Collins, in his inimitable Ode to the Passions:
When Cheerfulness, a nymph of healthiest hue,
Her bow across her shoulder flung,
Her buskins gemm'd with morning dew,
Blew an inspiring air, that dale and thicket rung,
The oak-crown'd sisters, and their chaste ey'd queen,
Satyrs, and sylvan boys, were seen
Peeping from forth their alleys green.

Et genus agricolûm late sentiscere, quom Pan,
Pinea semiferi capitis vallamina quassans,
Unco sæpe labro calamos percurrit hianteis,
Fistula sylvestrem ne cesset fundere musam.
Cætera de genere hoc monstra ac portenta loquuntur,
Ne loca, deserta ab divis quoque, forte putentur
Sola tenere; ideo jactant miracula dictis:
Aut aliquâ ratione aliâ ducuntur; ut omne
Humanum genus est avidum nimis auricularum.

Ver. 604. *Led on by* Pan, *with pine-leav'd garland crown'd,*] The history and genealogy of this deity is involved in much obscurity. That he is of very ancient date, we learn from Herodotus, who tells us that he was known among the Egyptians: and Mr. Bryant, from analysing his name upon the system of his Ammonian Radicals, has given him an origin still more ancient, and contended that he must have been of Babylonian race, since Pi-An or P'-An is the "Oracle or inspiration of the Sun:" whence he proceeds to assert "that he obviously constituted one of the deities to whom the system of solar worship was directed among this superstitious people." His image, according to Herodotus, was carved and painted, both among the Egyptians and the Greeks, with the face of a female, and the legs of a male goat. Hereby, perhaps, becoming an apt emblem of generative power. Γραφουσι δε δη και γλυφουσι οι ζωγραφοι και οι αγαλματοποιοι του Πανος, κατα περ Ἑλληνες, τραγαλμα, αἰγοπροσωπον και τραγοσκελεα. Herod. l. ii. c. 46.

Ver. 605. *And seven-mouth'd reed his labouring lip beneath,*] Pan, according to the fabulous tradition of the poets, was the inventor of the sweet and rural instrument here referred to; which has lately been revived under his own name in this metropolis, and forms, at the present day, a common accompaniment to the street-organ. Thus Virg. Ecl. ii. 32.

Pan primus calamos cera conjungere plures
Instituit.——

The construction of the modern pipe of Pan, or *mouth-organ* as it is denominated, and by no means improperly, by the players upon it, is precisely similar to that referred to by the pastoral poets of Greece and Rome; and the mode of sounding it with the upper lip recumbent, and flying over the hollow reeds, is by no means different, as we learn indeed, from the very verse before us:

Unco sæpe labro calamos percurrit hianteis.

As this instrument is constructed at present, the number of reeds varies from seven to twelve or fourteen; exhibiting a broader scale than perhaps the pipe of Pan was ever possessed of among the Greeks and Romans. Yet even this is in some degree uncertain; for although it is generally conceived that the ancient fistula consisted but of seven reeds, in consequence of Virgil's having thus represented that of Damætas in the eclogue just quoted:

Est mihi *disparibus septem* compacta *cicutis*
Fistula, Damætas dono mihi quam dedit olim:

A pipe is mine, of *seven* unequal reeds,
Gift of Damætas, fam'd for generous deeds:

Yet that it often exceeded this compass, we are fully assured from the mention of one in Theocritus, that extended to nine:

Συριγγ' ἀν εποιησα καλαν εγω ενιαφωνον,

Led on by Pan, with pine-leave garland crown'd,
And seven-mouth'd reed his labouring lip beneath,
Waking the woodland Muse with ceaseless song.
These, and a thousand legends wilder still
Recount they; haply lest their desert homes
Seem of the gods abandon'd, boastful hence
Of sights prodigious; or by cause, perchance,
More trivial urg'd, for ne'er was tale so wild
Feign'd, but the crowd would drink with greedy ears.

Λευκον καρον ιχνοισαν, ισον κατω, ισον ανω θεν,
Ταυτην κατθεινν. Idyl. viii. 18.

This *nine*-ton'd pipe, nice-modell'd by these hands
And held by whitest wax in sweetest bands,
Here pledge I.

This fistula, or syrinx, which, in its first and rudest state, was, perhaps, formed of the stalks of oat, or wheat, united together by wax, as stated in the passages above, was afterwards manufactured from substances much more firm and durable, and united in a much more elegant and elaborate manner: hence we read, not only of the avena, and stipula, but of the calamus, arundo, buxus, tibia, cornu, and æs; all which substances were occasionally, and, perhaps, progressively resorted to: and hence the fistula, or syrinx, may be regarded as the father of a numerous family. The modern church-organ itself cannot, indeed, be otherwise than attributed to the same source: and the Hebrew organ, or the musical instrument so translated (עוגב or ענב), must much more nearly have resembled the syrinx than the elaborate instrument of this name in its present state of perfection; for there are various passages in the sacred writings which intimate that it was of easy construction, and played upon by the lips. Thus, in the supplemental psalm in the Septuagint, which ranks as the hundred and fifty-first, David declares of himself, that when a shepherd,

Αι χειρες μου ΕΠΟΙΗΣΑΝ ΟΡΓΑΝΟΝ,
Και οι δακτυλοι μου ηρμοσαν ψαλτηριον.

My hands *form'd the organ*,
And my fingers harmonized the psaltery.

Whence Mr. Parkhurst ingeniously conjectures, that the *organ* here referred to was the very pipe or syrinx described in this identical passage of our own poet: and explains, Ezek. xxxiii. 31, 32. in which the same Hebrew term twice recurs, as follows, "*For they make* (*thy words*) ענבים, (*like*) pipes *in* or *at their mouth*, *i. e.* something to play or trifle with. Ver. 32. *And behold, thou art to them* כשיר ענבים, *as a song* (for) the pipes (*i. e.* to be sung with) *of one who has a pleasant voice, and is skilled in music.*

As to the "pine-leaved garland" with which Lucretius has here decorated the god of rustic scenery, or rather of universal nature—κοσμοιο το ΣΥΜΠΑΝ—we know, from the testimony of a vast variety of the lyric and bucolic bards of Greece and Rome, that this was his appropriate dress. Thus Ovid:

——*pinu præcincti* cornua *Panes*. Met. xiv. 638.

And Pan, his horns with pine-leave chaplets wreath'd.

A passage that might be supported by an infinitude of similar tendency, if necessary.

Ver. 611. ——*for ne'er was tale so wild*
Feign'd, but the crowd would drink with greedy ears.] The original is admirably beautiful, and expressive:

Quod super est, non est mirandum, quâ ratione
Per loca, quâ nequeunt oculei res cernere apertas,
Hæc loca per voces veniant, aureisque lacessant:
Conloquium clusis foribus quoque sæpe videmus.
Nimirum, quia vox per flexa foramina rerum
Incolomis transire potest, simulacra renutant;
Perscinduntur enim, nisi recta foramina tranant:
Qualia sunt vitri, species quæ transvolat omnis.
Præterea, parteis in cunctas dividitur vox,
Ex aliis aliæ quoniam gignuntur; ubei nam

——ut omne
Humanum genus est avidum nimis auricularum.
Ver. 597.

Which Mr. Hume has thus quoted and paraphrased. Ep. on Miracles. "The smallest spark may here kindle into the greatest flame: because the materials are always prepared for it. The *avidum genus auricularum*, the gazing populace, receive greedily, without examination, whatever soothes superstition and promotes wonder."

That the mind, in a state of rural solitude and retirement from the world, has been led into the belief of such preternatural existences as are here referred to, the attentive examiner of nature can easily conceive, and upon grounds which, in a variety of places, are hinted at by our poet himself.

Ver. 616. *For voice unhurt through flexile tubes can wind,*] It should seem from this verse, that the ancients were by no means unacquainted with speaking-trumpets, or stentorophonic horns, as they have been often named, although the invention be claimed by Moreland, Kircher, and other competitors among the moderns. It is, in corroboration hereof, an ascertained historic fact, that Alexander the Great was accustomed to address his army with some such tube, which conveyed his voice distinctly to a distance of not less than a hundred furlongs, or *stadia*; as it is also that the Greeks, even prior to this period, had invented telegraphs, or instruments for communicating *written* intelligence to a considerable distance, in the same manner as the trumpet of Alexander communicated *oral*. The inventor of the modern telegraph was Don Salvador, D. Coronado, a native of Spain, and director of the Madrid Observatory. He was at Paris when the first idea occurred to him, which he followed up with unremitting attention for four years, from 1786 to 1790, before he publicly announced it. He admits, however, that he was indebted for the basis of his invention to the Grecian telegraph, just referred to, and especially as it was afterwards improved by cardinal Ximenes. See the abbate Requeno's Progresos, Perdida, y Restablicimiento del antiguo arte de trablar desde lejos en la guerra.

It is to the use of these *flexile tubes*, in the science of acoustics, that we are indebted, in modern days, for a variety of very curious experiments and effects: and especially the spectacle which, under the name of "*The Invisible Girl*," attracted such numerous bodies of spectators, and excited so much astonishment a few years ago in the metropolis. The principle upon which the machine was constructed is clear, and its application easy. Sound, though heard in all directions, flies with far more energy in a strait line

Nor strange, moreo'er, conceive it that the voice
Full many a scene should pierce, the nerve of sound
Rousing, where sight's keen gaze can never reach.
For voice unhurt through flexile tubes can wind;
But the light image never; since the pore
When not direct, as that of lucid glass
Which all transmits, abrades it and destroys.—

Voice through the total scene, too, spreads alike;
Since, when once form'd, to vocicles minute

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than in any other; and when once, by the use of flexible tubes, thrown out of a strait line, recovers it as quickly as possible, and perseveres in the same direction. Hence, a speaking trumpet, by being curvated, may throw it to any quarter at pleasure; and the person directly opposite to the broad end of the tube, will hear it at a very considerable distance, although those immediately on each side of the tube may be scarcely able to hear it at all, or at least but very indistinctly. Yet even the person, who is directly opposite, will hear the projected sound with much more force, and at such a distance from the speaker as that no one near him shall hear it besides, if he also be provided with a similar *speaking-trumpet*, and convert it into a *hearing-trumpet*, by applying the narrow end of it to his ear, instead of to his *mouth*; for he will, in such case, find, thrown upon his ear, the whole concentrated volume of sound that the expanded end of the tube is able to collect. If then, into the figure introduced before the company, one or more tubes of this description be inserted, either at their broad or their narrow end, and communicate together, and terminate in one common opening, as some part of the head, for example, if the figure be of human representation, whatever sounds are thrown into the tube by a speaker at the other end of the trumpet, must necessarily follow the course of the different tubes, be their deflection what they may, and rush forwards in a strait line from their common opening;—should such strait line point towards the ceiling, and a tube of similar description, with its broad end downward, be inserted into the ceiling, from a room above, so as to catch the projected sound, it is obvious, that a person concealed in such upper room, with his ear applied to the tube, will hear the words communicated far more forcibly than the bye-standers in the lower room; and it is equally obvious, that, in consequence of its following the same direction conversely, the answer returned must strike the ears of the listeners to the different tubes, that are inserted into the figure, much more powerfully than it can do the ears of any other persons whatever; and that, if such answer be not returned very loudly, they will be the only persons who will be able to hear it at all. It is obvious also, that if it be more convenient to throw the sound into a room below, or even on one side of that in which the company is collected, instead of through the ceiling, it may be effected with equal ease; the aperture, both in the figure and in the wainscot, floor, or ceiling, being respectively concealed by some light covering, which may have no effect in obstructing the sound in its passage.

Dissiluit semel, in multas, exorta quasi ignis
Sæpe solet scintilla suos se spargere in igneis:
Ergo replentur loca vocibus, abdita retro
Omnia quæ circum fuerunt, sonituque cientur.
At simulacra viis de rectis omnia tendunt,
Ut sunt missa semel: quapropter cernere nemo
Sæpta supra potis est, at voces adcipere extra.
Et tamen ipsa quoque hæc, dum transit clusa viarum,
Vox obtunditur, atque aureis confusa penetrat;
Et sonitum potius, quam verba, audire videmur.
Hoc, qui sentimus sucum, lingua atque palatum
Plusculum habent in se rationis, plus operaï.

Ver. 626. ——*whence none can see*
Things pent above,——] I follow the edition of Mr. Wakefield, who has certainly restored the true reading:

——quapropter cernere nemo
Sæpta supra potis est.

In all the common impressions, and in every translation hitherto exhibited, for *sæpta* we meet with *se*, which would make the sense thus:

Things *plac'd* above him:

an explanation that by no means so satisfactorily illustrates our author's argument, which he thus more fully exhibits in Book VI. 984.

Through the stone-wall voice winds its sinuous way.

Ver. 628. *Yet voice itself, thus piercing, faints obtuse*,] The classical reader will here, perhaps, be reminded of a passage in the Orestes of Euripides, which seems, almost in vain, to have exercised the ingenuity of all his expositors:

Ἰὼ ἀτρεμαίαν ὡς ὑποφοβον
Φέρω βοαν

Still are my words, as utter'd in a room
Retir'd and private.

Ver. 630. *To* TASTES *proceed we:*——] The phænomena, as I have before observed, of all the senses are accounted for, by the Epicurean theory, upon the same common principle, to wit, an efflux of corpuscles from the substance perceived impinging against the different organs of perception, and exciting their appropriate powers into action. This doctrine, as we have already seen, has undergone a considerable degree of modification in the modern schools of philosophy, with respect to the two senses our poet has just discussed; those, I mean, of sound and vision. As to those which remain, and on the elucidation of which he is now entering, the Epicurean theory has sustained no important variation: their action being accounted for from the stimulus of the corpuscles of the substance perceived impinging against the nerves of the perceiving sense.

It breaks innumerous, as sparks at night
To countless sparklings; hence the scene throughout
O'erflows with sound, through every winding felt.
Yet visual images, when once propell'd,
Rush but in lines direct; whence none can see
Things pent above, though voice th' enclosure pierce.
Yet voice itself, thus piercing, faints obtuse,
Heard indistinct, and rather sound than sense.

To TASTES proceed we: whence the tongue's nice powers
Spring, and the curious palate, full t' unfold.—

Ver. 630. ——*whence the tongue's nice powers*
Spring, and the curious palate, full t' unfold.]
In the original thus, v. 619.

Hoc, qui sentimus sucum, lingua atque palatum
Pluseulum habent in se rationis, *plus* operaï.

The common principle of action being applied, it nevertheless requires *more* labour to develope, and *more* attention to discern, whence different substances should possess such an infinite variety of sapid essences, and the organ of taste be able to scrutinize them with so much accuracy than was necessary in discussing the less complex phænomena of sound. This our poet hints at in the verses now quoted, and which are properly translated both by Marchetti and Des Coutures: thus the former:

Ma la lingua, e il palato, ove consiste
Del gusto il senso, han *di ragione, e d'opra*
Parte alquanto maggior.

And thus the Baron des Coutures:

Le goût est le bien-fait de la langue et du palais; l'explication de cet effet delicieux, quoique plus vraisemblable, *est beaucoup plus difficile.*

Our English translators, on the contrary, render the passage, instead of "more difficult," "quite as easy."

Thus Creech, hastening forwards with all his might:

We taste *(that's soon explained)* when savours wrung, &c.

And Guernier thus, in simple prose:

"Nor is the account of the tongue and palate, by which we taste, a subject of *greater nicety* or *more difficulty* to explain." An assertion as completely contrary to the text which it pretends to interpret, as could well be offered.

I dwell on this circumstance, merely to prove how carelessly and inaccurately, even in the minutest matters, Lucretius has hitherto been presented to the English reader.

The doctrine here evinced concerning taste, was imported by Epicurus from the earlier school of Democritus; for which we have the testimony of Theophrastus, lib. vi. 2.

Principio, sucum sentimus in ore, cibum quom
Mandundo exprimimus: ceu plenam spongiam aquaï
Si quis forte manu premere, ac siccare, coëpit.
Inde, quod exprimimus, per caulas omne palati
Diditur, et raræ per plexa foramina linguæ.
Hoc, ubi lævia sunt manantes corpora suci,
Suaviter adtingunt, et suaviter omnia tractant,
Humida linguaï circum sudantia templa:
At contra pungunt sensum, lacerantque, coorta,
Quanto quæque magis sunt asperitate repleta.
Deinde, voluptas est e suco, fine palati;
Quom vero deorsum per fauces præcipitavit,
Nulla voluptas est, dum diditur omnis in artus.
Nec refert quidquam, quo victu corpus alatur,
Dum modo, quod capias, concoctum didere possis
Artubus, et stomachi humectum servare tenorem.

Ver. 638. ——*the masticating sense*
Through its moist temple——] In the original, ver. 628. thus:

Humida linguaï circum sudantia templa.

The word *templa*, as I have already had occasion to observe, is adopted by our poet to represent any species of concavity, great or small; but, in the present instance, it is selected with a peculiar felicity of hardihood to delineate the concavity of the palate. Francisco de Figueroa, copying from the example before us, has applied the same daring expression to the eyes, in one of his Sonnets:

Hermosos ojos donde amor se anida
De sus saetas *templo*, y donde enciende
Su immortal hacha.

Eyes! within whose bright dominions
Love conceals his purple pinions,
Temple! whence he takes his aim,
Where he lights his lambent flame—

In consequence of the concavity of the palate,

——de la boca
Concavas quixadas——

as Ercilla, another Spanish poet, has denominated it, Aranc. iii. the Greeks were accustomed to entitle it

First tastes the tongue, then, when the sturdy teeth
Wring from the food its juices; as though sponge,
Pregnant with water, by th' embracing hand
Were squeez'd to dryness. O'er the pores perplext
Of tongue and palate next th' excreted lymph
Rushes amain; and, when from atoms rear'd
Smooth and rotund, the masticating sense
Through its moist temple swells with dear delight:
But when the rough assail it, it recoils
And shrinks abhorrent, wounded in the strife.
Last, flows the trickling pleasure, or the pain,
Back towards the tonsils where the gorge first opes;
There flows and ceases, nothing felt beyond
Of joy or suffering through the frame diffus'd.
For nought imports it what the food employ'd,
If but the stomach into genial tides
Concoct it sole, and pour through every limb.

ουρανον, or the "heavens." Mr. Wakefield has a pertinent passage in his commentary upon this verse, selected from Isodorus, which I shall take the liberty of copying. Orig. xi. 1. *Palatum* nostrum, sicut cœlum, sursum est positum; et inde palatum a polo, per derivationem: sed et Græci similiter palatum ουρανον appellant, eo quod pro sui *concavitate* cœli similitudinem habeat. "The palate, like the heavens, is placed in the upper part of the animal machine; and hence we obtain the word *palate* from *pole*. In like manner, the Greeks denominated the palate ουρανον (the heavens), because, by its concavity, it resembles the heavenly arch."

Ver. 640. *But when the rough assail it, it recoils*] The principles of this theory are fully explained in Book II. v. 401. and following, to which I recommend the reader's renewed attention.

Ver. 646. *For nought imports it what the food employ'd,*] To the same effect Epicurus himself, and in terms for which the present and two following verses may stand as a translation. Ep. ad Menœc. Το συνειδεναι εν ταις απλαις, και ου πολυτελεσι διαιταις, και υγιειας εστι συμπληρωτικον, και προς αιτηκαιας του βιου χρησις αοκνον ποιει τον ανθρωπον.

Nunc aliis alius quî sit cibus, ut videamus,
Expediam; quâ reve, aliis quod triste et amarum est,
Hoc tamen esse aliis possit perdulce videri:
Tantaque in hiis rebus distantia differitasque est,
Ut, quod aliis cibus est, aliis fuat acre venenum.
Est itaque, ut serpens, hominis quæ tacta salivis,
Disperit, ac sese mandundo conficit ipsa.
Præterea, nobis veratrum est acre venenum;

Ver. 653. ——*what poisons this*
To that proves healthful, and prolongates life.] This assertion is true to an adage; and it has of late been accurately ascertained, that the indisposition which frequently succeeds a meal made upon muscles, or other shell-fishes, has, in many instances, proceeded from their having fed in a stream so strongly impregnated with copper, as to give evident marks of its existence in the fluid found in their stomachs: and yet the mineral which, when diluted with other food, thus proves a poison to mankind, produces no injury to the shell-fish which partakes of it in a state of far higher concentration, and for any thing we know to the contrary, may contain a substance capable of fattening it. In the same manner, although about three grains of the venom of a viper, dissolved in water, be calculated by Spalanzani to be sufficient to destroy a man in full health, the Psylli of Egypt are reported by the most authentic travellers through this country, to be able to eat the whole animal alive, beginning at the head, and of course devouring the entire cyst of secreted poison, without the smallest degree of harm. See, on this subject, the treatises of Redi and Fontana. The diet of the viper, which is a mixture of the common vegetables and insects of the fields, we know, moreover, to be not in itself poisonous; and yet here is a poison secreted from healthy food: while, on the contrary, there are a variety of insects and animalcules residing in the neighbourhood, and even in the concavities of lead and copper mines, which seem to be supported almost entirely by their ore and effluvium, digesting them with the most perfect safety, and deriving from them a healthy nutriment, hereby demonstrating, that they possess a strictly chemical power of decompounding the particles of which such minerals consist, of destroying their deleterious property, and of recombining them into a nutritive substance. See Note on ver. 657. of this Book.

Ver. 655. *Thus dies the snake that human spittle tastes,*] Such, at least, was the universal opinion from the æra of Aristotle to that of Pliny; both of whom assert the same fact. Galen also contends for its truth, but confines the saliva to that secreted in the morning before the fast is broken. Many of the most celebrated Italian naturalists, however, and particularly Redi and Spalanzani, who have made a variety of experiments for this express purpose, maintain that all such assertions are erroneous, and that no sensible change is produced upon either snake or viper by such a deglutition. It is not improbable, however, that Lucretius may still be right with respect to some species not yet essayed; and his general accuracy ought to induce our hesitation.

Ver. 657. *Wild hellebore, that goats and quails ma-tures,*] This vegetable is of two sorts; the

Oft find we, too, that various frames demand
As various viands; and that what to some
Seems harsh and hateful, some perpetual deem
Delicious most; while e'en so vast, at times,
The strange discordance, that what poisons this
To that proves healthful, and prolongates life.
Thus dies the snake that human spittle tastes,
Work'd into madness, self-destroy'd; and thus
Wild hellebore, that goats and quails matures,

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white, arranged in the Linnéan class and order polygamia monœcia; and the black, denominated also melampodium, to be found under the division of polyandria polygynia. Both are violent cathartics when employed on mankind; and hence may, undoubtedly, prove fatal in large doses. But the hellebore, more immediately referred to by our poetic naturalist, is probably the latter, which was the plant most in estimation among the Greeks and Romans. The fact here related by Lucretius is confirmed by Pliny, with respect to goats as well as quails, lib. x. 12: though, in another chapter of the same Book, lib. x. 23. he intimates that it was the *seeds* of the hellebore, that were most grateful to the taste of the quail.

This justly celebrated naturalist also tells us, in the same Book, that the cicuta, or water-hemlock, proves equally nutritious to both orders of animals here enumerated, baneful as it certainly is to almost every class besides; thus confirming a similar assertion of our zoological bard in Book V. v. 917.

The truth is, that there is no plant in nature but affords nutriment to some class of animals or another: poison is only a relative term; and nothing is absolutely and universally deleterious. The cicuta, which is thus luxuriously feasted upon by goats and quails, is carefully avoided by horses and the human race; while the horse, on the contrary, riots on the aconite, or bane-berry, which the goat will not touch. In the same manner, the long-leaved hemlock, which the cow flies from as a poison, is enjoyed by the sheep, which avoids in turn the prickly thistle that the cow feeds upon when it is cut and become flaccid. The euphorbia, again, or spurge, so noxious to man and most quadrupeds, is greedily devoured by several of the insect tribes; and the dhanésa, or Indian buceros, feeds to excess on the colubrina or nux vomica.

There is an ingenious paper replete with instances of the same kind, inserted by Mr. Barton in the American Philosophical Transactions, Vol. V. No. 7, in which the writer notices, that the leaves of the kalmia latifolia, known in the United States by the name of laurel, great-laurel, winter-green, spoon-haunch, and spoon-wood, are eaten with impunity by the deer (cervus Virginianus of Gmelin), and by the round-horned elk (cervus wapiti of Barton); while they are poisonous to sheep, to horned cattle, and to horses: in the former of these animals, producing convulsions, foaming at the mouth, and death; of which effects our author adduces undeniable instances. Yet it is from the kalmia that the bee extracts a great portion of her honey; and as a proof that she does not separate the healthy from the poisonous part of the plant, the honey which she hence selects without injury to herself, is sure to poison every one who partakes of it. It appears obvious, from the same paper also, that many birds, and especially of the

At capris adipes, et coturnicibus, auget.
Id quibus ut fiat rebus cognoscere possis,
Principio meminisse decet, quæ diximus ante,
Semina multimodis in rebus mixta teneri.
Porro, omnes, quæquomque cibum capiunt, animantes,
Ut sunt dissimiles extrinsecus, et generatim
Extima membrorum circumcæsura coërcet;
Proinde et seminibus constant, variantque figurâ.
Semina quom porro distent, differre necesse est
Intervalla, viasque, foramina quæ perhibemus,
Omnibus in membris, et in ore, ipsoque palato.

genus tetrao of Linnéus are extremely fond of it as food: and that so extensive a mortality was produced in Philadelphia, in the years 1790 and 1791, amongst those who banquetted on the tetrao cupido, or common pheasant of the country, in whose crop the leaves and buds of the kalmia latifolia were occasionally detected, that the mayor of this city thought it his duty, by a public proclamation, to caution the people against eating the pheasant.

Every created substance, therefore, possesses the basis of a nutriment for some order of animals or other; and all that seems necessary, with respect to those generally esteemed the most poisonous, is a peculiar power in the stomach to select the parts that are nutritious from those that are baneful, and to secrete these alone into the system. The stomach of different animals are, for this purpose, formed with a vast diversity both of strength and structure. Some, like those of horses, sheep, oxen, dogs, man, and multitudes besides, are purely membranous; others, like those of the crow and the heron, are a combination of membrane and muscle; while a third sort, as the stomach of fowls, turkeys, ducks, and geese, is a firm and compact muscle alone; and is generally denominated a gizzard. In these different orders of stomachs, their mechanical force, and the gastric juice secreted from them, and which affords, in every instance, perhaps, a stronger solvent than any other fluid we are acquainted with, must both differ extremely. By a variety of accurate experiments made a few years ago by Dr. Stevens of Edinburgh, it appears, that gastric fluid in the stomach of dogs is capable of dissolving the hardest kind of animal substance that can be introduced into it, even the most rigid bones and balls of ivory; while, in equal time, very little impression is made upon potatoes, parsnip, and other vegetable substances. In ruminating animals, on the contrary, as sheep and oxen, the gastric juice speedily dissolves these latter, and all other kinds of vegetables, but makes no impression on even the softest kinds of animal foods, as flesh or fish. As the gastric juice of the human stomach is capable of dissolving, with nearly equal ease, both animals and vegetables, it has been rationally concluded, that nature originally intended mankind to feed upon both foods promiscuously.

The strongest stomach we are acquainted with is that of the turkey; and Reaumur and Spalanzani have made this extraordinary bird submit to a mul-

By man once swallow'd stamps his instant fate.
These facts to solve, thy mind must first retrace
A doctrine earlier urg'd, that all things hold
Deep in their texture seeds unlike of form;
And that each sentient class by food sustain'd,
Since large the variance of its outer make,
And stamp generic, must from nutrient seeds
Of form unlike be rear'd, and powers diverse.
But if its seeds thus differ, different too
Must prove in shape the fine absorbent pores
Whence draws the frame its nurture, o'er the tongue

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titude of experiments, to demonstrate its muscular vigour. When tin tubes filled with grain, and involved in several duplicatures of tin over them, were forced into the gizzard of this animal, and allowed to continue there for about twelve hours; on dissecting it, after this period of time, they were discovered to be broken, crushed, or most surprisingly distorted. Spalanzani, indeed, afterwards repeated the experiment with fragments of sharp-pointed glass, and balls of lead with needles, and even lancets projecting from the surface about a quarter of an inch in every direction; and uniformly found, on dissecting the bird about ten or twelve hours afterwards, that the points of glass were rounded and polished; and the points of the needles and lancets broken off abruptly, close to the surface of the balls in which they were inserted. In some cases, he suffered the animal to discharge them naturally, which was done without any apparent pain; and in no instance did he discover, upon dissection, the smallest degree of laceration in the interior coating of the gizzard.

In the stomachs of many of the feathered tribes we almost uniformly meet with a variety of little stones; these were ingeniously supposed, by the late Mr. J. Hunter, to serve the purpose of grinding into smaller pieces the rugged food on which they frequently subsist. See his Observations on Digestion. And it is a known fact, that crows, when supplied with bean seeds, will fasten them under their feet, and break them to pieces by repeated strokes of their long and heavy beaks before swallowing them.

Ver. 664. ——*must from nutrient seeds*
Of form unlike be rear'd, and powers diverse.]
This subject, so pertinently recurred to in the present place, the reader will find discussed more at large through a great part of the second Book, and particularly in ver. 659. and following.

Ver. 666. —— *different too*
Must prove in shape the fine absorbent pores]
"Some individuals of the human species have an aversion to particular kinds of food which are generally agreeable. These original aversions must be ascribed to some *peculiar modification in the structure of the organ, or in the disposition of its nerves.*" Smellie's Philosophy of Natural History, vol. i.

Esse minora igitur quædam, majoraque debent ;
Esse triquetra aliis, aliis quadrata, necesse est :
Multa rotunda, modis multis multangula quædam.
Namque, figurarum ratio ut motusque reposcunt,
Proinde foraminibus debent differre figuræ,
Et variare viæ, proinde ac textura coërcet.
Hoc, ubi quod suave est aliis, aliis fit amarum,
Illi, quoi suave est, lævissima corpore debent
Contractabiliter caulas intrare palati :
At contra, quibus est eadem res intus acerba,
Aspera nimirum penetrant, hamataque, fauces.
Nunc facile est ex hiis rebus cognoscere quæque.
Quippe, ubi quoi febris, bili superante coorta est,
Aut aliâ ratione aliquâ est vis excita morbi ;
Perturbatur ibei jam totum corpus, et omnes
Commutantur ibei posituræ principiorum :
Fit, prius ad sensum quæ corpora conveniebant,
Nunc non conveniant, et cætera sint magis apta,
Quæ penetrata queunt sensum progignere acerbum.
Utraque enim sunt in mellis conmixta sapore ;

Ver. 688. *E'en in the sweets Hyblæan honey boasts.*] The impunity with which bees, and other insects, fly from flowers to flowers possessing the most poisonous property, I have already adverted to in the Note on v. 657. of this Book ; and have instanced the kalmia latifolia, from which, in certain parts of America, they collect large portions of honey, and which is fatal to sheep, horned cattle, horses, and even man ;—although, like the bee, the deer, the horned elk, and pheasant, feed on it without injury. The andromeda mariana, or broad-leaved moor-wort, and many species of agaricus afford other very extensive sources of honey to the bee tribe, though equally deleterious to sheep, and many other cattle. It is

Spread bibulous, the palate, and the limbs;
Now large, now small, triangular, rotund,
Squares, polygons, in every changeful mode.
For to the varying seed the varying duct
With nicest adaptation must respond.
And, hence, when foods of bitter taste to some
Prove sweet to others, where the flavour charms,
The smoothest seeds alone the palate drinks,
Through all its pores inebriate; while, revers'd,
Where aught offends, those jagged more and rough
Pierce the nice tubes, and tear their tender mouths.
Thus all alike springs obvious. When the frame,
From bile o'erflowing, or some cause as fierce,
Sickens with fever, every organ shakes
With tumult dire, through all its texture chang'd.
Hence atoms erst apportion'd, now no more
Apportion'd prove; while those far readier fit
That rouse the sense to hatred and disjust:
For both in all things lurk, as urg'd above,

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probable, that in some cases of these poisonous plants, the honey collected by the bee undergoes, in the course of its process, so complete a change, as to be deprived of its unwholesome principle; but we know that the observation here advanced by our poet is, in many cases, true; for the poisonous honey in Georgia, South Carolina, Florida, and many other countries, entirely results from the unchanged retention of these deleterious elements. Occasionally, indeed, the honey itself exhibits the very taste and smell of the poisonous flower whence it is secreted, and particularly when obtained from the datura stramonium. The poisonous honey noticed by Pliny and Dioscorides, and not sufficiently accounted for by these naturalists, proceeded entirely from the cause here assigned by Lucretius, and now uniformly proved and admitted.

Id, quod jam superâ tibi sæpe obstendimus ante.
Nunc age, quo pacto nareis adjectus odoris
Tangat, agam. Primum, res multas esse necesse est,
Unde fluens volvat varius se fluctus odorum;
Et fluere, et mitti volgo, spargique, putandum est.
Verum aliis alius magis est animantibus aptus,
Dissimileis propter formas; ideoque per auras

Ver. 689. *But come, for* ODOURS *call us, and the powers*
That sway th' obsequious nostrils.——] The doctrine of taste or geumatics applies, without any variation of consequence, to that of olfaction or odours. The different construction of animals of different, and even frequently of the same class, in the organization of the faculties of taste and smell, sufficiently accounts for the disparity of their likings and antipathies, with respect to these two senses. The grand object of the second Book was to establish the principles of this common theory: in the present, our poet does but little more than apply them to positive facts; hereby illustrating the general phænomena of external sensation. That the doctrine inculcated in the subsequent observations was that of Epicurus, we know from the testimony of his own words, Diogenes Laertius, x. 53: Και μην και την οσμην νομιστεον, ὡς περ και την ακοην, ουκ αν ποτε παθος ουθεν εργασασθαι, ει μη ογκροι τινες ησαν απο του πραγματος αποφερομενοι, συμμετροι προς το τουτο το αισθητηριον κινειν.

Naturalists have observed the closest alliance between the two senses of smell and taste; insomuch, that animals without vertebræ, which are destitute of the *olfactory membrane*, give evident tokens of deriving some idea of smell from the sense of taste alone. Generally speaking, among all other animals, as the mammalia, birds, reptiles, and fishes, the olfactory sense appears to exist in proportion to the extent of the olfactory membrane; coincidently with which Blumenbach and Soemmering observed, upon dissection, that, among mankind, those who were remarkable for acuteness of smell, were possessed of wide, dilated nostrils, with a broader expansion of membrane than generally appertains to the race. From his common mode of education, however, and an habitual exposure to strong odours, to a perplexed combination of odours, and especially from the use of high-flavoured foods, the sense of smell in man soon loses a great proportion of its keenness and delicacy: and hence instances of acute olfaction are far more frequently to be met with, as M. Virey has justly observed, among savages, than among civilized nations. In a state of high and morbid irritability, however, the sense of smell, as well as those of taste and hearing, acquires, at times, even in civilized life, an extraordinary degree of vivacity, so as to afflict the persons who are thus peculiarly affected. But almost all other animals, who possess any sense of smell whatever, possess it in a much stronger degree than man under any circumstances; an ordination most replete with wisdom, as it is generally by this sense that animals are directed in their pursuit of food, and taught what to make choice of, and what to reject. Almost all the insect-tribes, more particularly, are gifted with a sense of smell in a very high degree of perfection, and especially the sylphæ, dermestes, nicrophores, and musca vomitoria. Among birds, the vulture, the owl, the woodcock, and other aquatic birds, are supposed, by Scarpa, to possess the greatest acuteness of scent. Few observations have been made upon fishes, but even these are said, both by Camper and Monro, to have a very powerful smell, considering the fluid in which they are immersed; and, undoubtedly, it must be so, if, as the latter

E'en in the sweets Hyblæan honey boasts.
But come, for ODOURS call us, and the powers
That sway th' obsequious nostrils. Odours fine,
Wave after wave, flow forth in ceaseless tide
From many a substance, many a living tribe
Attracting different, as diversely rear'd.
Hence bees, through distant ether, wind the scent

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conjectures, they ascertain, by the sense of smell alone, the bait which the fisherman holds out to them at a distance; a fact, however, which is doubtful, and which M. Virey is rather disposed to attribute to their keenness of sight.

Ver. 690. ——*Odours fine,*
Wave after wave, flow forth in ceaseless tide] It is accurately observed by Theophrastus, in his treatise on odours, that every thing animate or inanimate throws forth some odour peculiar to itself. We are not sensible of any such effluvium exhaled from our own bodies, yet it is by this that dogs and other quadrupeds chiefly distinguish their masters from strangers. The Journal des Sçavans, an. 1667, gives us, indeed, an instance of a monk who was possessed of a similar acuteness of smell, and could ascertain, by the difference of odour alone, the sex and age of a person, the manner of life to which he was accustomed, as also whether he were married or single. Whether this example, supported indeed by others of a parallel tendency, be correct or not, it can scarcely be doubted that quadrupeds in general, and, perhaps, most other animals, are gifted with olfactory powers of a similar description, and act upon the notice thus communicated to them.

It is probable, indeed, that the odours emitted by animals are quite as diversified as those exhaled from vegetables, and in many instances quite as agreeable. The most common odour of which we are sensible, is that of musk; and there is no odour, perhaps, that is yielded so plentifully, although it is seldom to be obtained in a pure and concentrated state. It issues from the bodies of many of the ape tribe, and especially the simia jacchus; it is traced, still more profusely, in the opossum; and is occasionally to be found in some species of hedge-hogs, water-rats, hares, and serpents, especially the natrix Æsculapii. The civet is the production of the civet-cat alone,—the viverra zibetha, and the viverra civetta of Linnæus. There are, however, some species of cats that yield it in a small quantity; while the castor fiber, the sus tajassu, and many other species of swine, emit an odour of castor. Among insects, however, these odours are considerably more varied, as well as considerably more pleasant: for the musk-scent of the cerambix moschatus, the apis fragrans, and tipula moschifera, is far more delicate than that of the musk-quadrupeds; while the cerambix suaveolens, and several species of the ichneumon yield the sweetest perfume of the rose; and the petiolated sphex, a balsamic ether, highly fragrant, but peculiar to itself. Yet insects themselves are not without instances of disagreeable, and even disgusting scents. Several of the melitæ breathe an essence of garlic or unions; the staphylinus brunipes has a stench intolerably fetid, though combined with the perfume of spices; while caterpillars, almost all the hymenoptera, and several other classes, emit an acid exhalation, in many instances excessively pungent. The carabus crepitans, and selopeta of Fabricius, make a strange crackling sound while in the act of emitting a similar vapour.

Ver. 694. *Hence bees, through distant ether, wind the scent*
Of honey'd flowrets;——] The same idea is pursued more at large, yet without loss of spirit, by Virgil, in the following verses:

Quod superest, ubi pulsam hiemem Sol aureus egit

Mellis apes, quam vis longe, ducuntur odore;
Volturiique cadaveribus: tum, fissa ferarum
Ungula quo tulerit gressum, permissa canum vis
Ducit; et humanum longe præsentit odorem,
Romulidarum arcis servator, candidus anser.
Sic aliis alius nidor datus ad sua quemque
Pabula ducit, et a tetro resilire veneno
Cogit; eoque modo servantur secla ferarum.
Hicc' odor ipse igitur, nareis quiquomque lacessit,
Est alio ut possit permitti longius alter:
Sed tamen haud quisquam tam longe fertur eorum,
Quam sonitus, quam vox; mitto jam dicere, quam res,

Sub terras, cœlumque æstivâ lucc reclusit:
Ille continuo saltus silvasque peragrant,
Purpuerosque metunt flores, et flumina libant
Summa leves. Georg. IV. 51.

Thus admirably translated by Mr. Sotheby:

Now when the sun, beneath the realms of night,
Dark winter drives, and robes the heavens with light,
The bees o'er hill and dale, from flower to flower,
In grove and lawn the purple spring devour,
Sip on the wing, and lightly brushing lave
Their airy plumage in th' undimpled wave.

Ver. 695. ——*vultures, foul of maw,*
Track the vile carcase;——] The avaricious desire of this animal for carrion is known, even to a proverb; and sacred and prophane poetry have both innumerable allusions to its attendance upon armies, and other multitudes, among whom there is a large and perpetual mortality. Lucretius rightly informs us, that they *follow* the carcase, *ducuntur cadaveribus;* and the distance at which they are reported to discover animal food, would appear to be almost incredible, if all naturalists had not remarked their peculiar acuteness of smell. Pliny, however, with gross credulity, attributes to them a sense of prescience, as well as of acute smell; and asserts, Nat. Hist. x. 46. "that they fly to the scene of carnage three days *before* it takes place, as if they had a presentiment of the slaughter before the smell of the dead bodies attracted them."

In the Almazeniyyo, or Moallakat poem of the Arabian bard Zohair, there is an admirable personification of Death, who, on this account, is represented as the mother of vultures:

Fashadda walam yofzô boyútán catheírahán
Ledaí hhaíto álkat rahhlahá ommó kâshami

"He (Hosein, the son of Demdem) made a fierce attack; nor feared the number of tents where Death, the mother of Vultures, had fixed her mansion." Sir William Jones.

The *vulture* of the Greek and Roman bards is the *hawk* of Ossian; for the vulture is scarcely ever to be met with in Britain or Ireland, and the hawk in poetry answers the purpose just as well. Thus, in his Berrathron: "The hawks rush from all their winds; they are wont to trace my course. We re-

Of honey'd flowrets; vultures, foul of maw,
Track the vile carcase; the vivacious hound
Hunts o'er the hills the cloven-footed foe;
And the white goose, preserver of our state,
The haunts explores of mortals. Odours hence
From odours differing, every brutal tribe
Its food selects, from baneful poison flies,
And through all-time maintains its rank entire.
Thus varying scents the varying nostrils wound,
To different distance urg'd; yet none so far
As voice or sounds, not here those films to name
That strike the pupil, and solicit sight.

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joiced three days above the dead, and called the hawks of heaven. They came from all their winds to feast on the foes of Annir."

Ver. 698. *And the white goose, preserver of our state,*] The story of the Roman garrison having been awakened by the gabbling of a flock of geese that were consecrated to Juno, when the Gauls were in the very act of scaling the Capitol, is known to every one. Geese, in consequence of this incident, were highly venerated by the Romans, a public stipend was allowed the censors for their maintenance, as we learn from Pliny, Nat. Hist. x. and it was from this peculiar attention of the Roman citizens, perhaps, more than from any other circumstance, that geese were rather attached to places of public resort, than other classes of fowls.

In the Birman empire of the East, of which almost the whole of our knowledge is derived from the account lately published by Major Symes, the goose is at this hour the national symbol. It is curious to observe this coincidence of reverence, between nations that never appear to have had the smallest degree of intercourse, towards a bird that has generally been an object of contempt in other countries, excepting, indeed, as an article of food.

Ver. 700. ——*every brutal tribe*
Its food selects, from baneful poison flies,] "Brute animals select their food chiefly by employing *the sense of smelling, and it seldom deceives them.* They easily distinguish noxious from salutary food; and they carefully avoid the one, and use the other for nourishment." See Smellie's Philosophy of Natural History, vol. i.

Ver. 703. *Thus varying scents the varying nostrils wound,*] Upon the principle here advanced, that is, according to the express configuration of the olfactory organ itself, often differing widely in the very same species of animals, we may readily account for the heteroclite desires and disgusts we so frequently meet with: why volatile alkalies are so grateful to some, and the odour of parsnips or cheese so abhorrent to others. But whether it be from their essential animal oil, that cats, and, occasionally, other quadrupeds, are so dreadfully loathed, as we sometimes find they are, even when concealed from the vision, it is not easy to determine. It is not impro-

Quæ feriunt oculorum acies, visumque lacessunt :
Errabundus enim tarde venit, ac perit ante
Paullatim, facileis distractus in aëris auras.
Ex alto primum quia vix emittitur ex re :
Nam penitus fluere atque recedere rebus odores
Significat, quod fracta magis redolere videntur
Omnia, quod contrita, quod igni conlabefacta.
Deinde, videre licet majoribus esse creatum
Principiis, quam vox ; quoniam per saxea sæpta
Non penetrat, quâ vox volgo sonitusque feruntur.
Quâ re etiam quod olet, non tam facile esse videbis
Investigare, in quâ sit regione locatum :
Refrigescit enim contando plaga per auras ;
Nec calida ad sensum decurrunt, nuntia rerum.
Errant sæpe canes itaque, et vestigia quærunt.
Nec tamen hoc solis in odoribus, atque saporum
In genere, est : sed item species rerum, atque colores,
Non ita conveniunt ad sensus omnibus omnes,
Ut non sint aliis quædam magis acria visis.
Quur etiam gallum, noctem explodentibus alis,

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bable, that the olfactory sense of persons thus affected may be more alive to the odour of such animals : yet it is at least possible that they may be influenced by a sensation peculiarly their own, and of which, from this very peculiarity, they may be incapable of communicating any idea.

Ver. 717. ——*for the stream*
Chills as it loiters, and with languid force]

In the original thus, ver. 707.

Refrigescit enim contando plaga per auras ;
Nec calida ad sensum decurrunt,

It is obvious, that the poet is speaking metaphorically, and means to assert, that the olfacient efflux is more tardy than that of sight or sound, and less active in its flight through the medium of the atmosphere. But all the versions hitherto extant have understood the expression literally ; and assert, in con-

For scents roam tardy, in uncertain path,
And die with ease beneath the breath of heav'n,
Since from the depth of things with labour flung.
For that thus deep they rise thou thus may'st prove:
That all when fritter'd, into dust reduc'd,
Or prob'd by fire, an ampler essence yield.
Then spring they, too, from particles more gross,
Since void of power the firm flint wall to pierce,
Pierc'd oft by sounds, by voices. Doubtful hence
Feel we full frequent, though in scents immers'd,
From what point flows the perfume; for the stream
Chills as it loiters, and with languid force
Excites the dubious nostrils; and hence, too,
Oft the fleet pack wide wanders mid the chace.

Nor tastes alone, nor odours different strike
The different tribes percipient; the light hues,
The semblances of things, diversely, too,
Pungent, or bland, the conscious sight assault.
The lion, thus, the cock's indignant eye

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sequence, that the effluvium which excites the sense of taste, is physically of a *colder* nature than any other: that it has scarcely warmth enough to make itself at any time perceptible. To this effect, Creech and Guernier, Des Coutures, and even Marchetti, who thus interprets the passage:

——che sempre
Più divien fredda ogni lor piaga e fiacca
Per l'aure trattenendosi, *e non giunge*
Calda al senso

Mr. Fourcroy, in a very ingenious paper on the Spiritus Rector, or Principle of Smell of vegetables, has abundantly proved, of late, that there is no particular principle which can be regarded as such. The aroma, or smell, he observes, at all times depends on some of the immediate principles of the plant it-

Auroram clarâ consuetum voce vocare,
Nenu queunt rapidei contra constare leones,
Inque tueri? ita continuo meminere fugaï.
Nimirum, quia sunt gallorum in corpore quædam
Semina, quæ, quom sunt oculos inmissa leonum,
Pupillas interfodiunt, acremque dolorem
Præbent, ut nequeant contra durare feroces;
Quom tamen hæc nostras acies nihil lædere possint:
Aut quia non penetrant, aut quod penetrantibus illis
Exitus ex oculis liber datur, in remorando
Lædere ne possint ex ullâ lumina parte.

Nunc age, quæ moveant animum res, adcipe; et unde,
Quæ veniunt, veniant in mentem, percipe paucis.
Principio hoc dico, rerum simulacra vagari
Multa, modis multis, in cunctas undique parteis,

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self. This may be extractive or mucilaginous, as in borage; of a nature fugacious and oily, as in jasmine; or volatile and oily, as in mint; aromatic and acid, as in benjamin; or hydrosulphureous, as in the distilled water of cabbage. Annales de Chimie, vol. xxiii.

Ver. 725. *The lion, thus, the cock's indignant eye*
Flies, nor can e'er encounter,——] Such, at least, was the common persuasion in the age of Lucretius. Pliny makes mention of the same fact, yet much less philosophically, attributes the terror of the lion to the colour of the cock's comb. Nat. Hist. viii. 18. But whether the individual instance, here referred to, be true, or not, it would be idle to doubt of a similar power possessed by several species of the serpent genus, and a power which is probably lodged in the pupil. There are many accounts of this extraordinary fascination of the rattle-snake over birds and squirrels related, and sufficiently attested in the Philosophical Transactions: and these have lately been confirmed by posterior travellers through America, of unblemished reputation and veracity. According to such historians, the first moment a bird or a squirrel catches, from the branches of the tree on which it is perched, the glance of the rattle-snake below, it is instantly convulsed with terror, rendered motionless, and incapable of saving itself by flight. As its terror increases, it gradually approaches its fascinating tyrant, and often enters, of its own accord, into the serpent's mouth, which he keeps open for this purpose. But the rattle-snake is not the only serpent possest of this wonderful faculty: the common field viper, according to the testimony of the viper-catchers themselves, at particular seasons of the year, possesses a similar power, and obtains its prey by its exercise. In the Philosophical Trans-

Flies, nor can e'er encounter, loud of wing,
Who drives the shadows, and the lazy dawn
Wakes with shrill clarion iterated oft.
For seeds there are that in the warlike cock
Of power peculiar lurk, which when once urg'd
Against the lion's sight, with wound severe
Tear the keen pupil; whence the tortur'd beast
Dares not the shock; while yet the human eye
Escapes uninjur'd, since the puny darts
Pierce not, or, piercing, through the yielding pores
Find a free entrance, and as free retire.
Now mark while briefly, next, the muse displays
What forms the mind excite, and through the soul
Rush viewless. First be this imprinted deep,
That light, innum'rous semblances of things,

actions (Abridged, vol. iii.) we have an instance narrated of this very fact, and under circumstances in which we should scarcely have expected it; for the vipers upon whom the trial was made were in a state of confinement, in which situation they never eat, excepting when big with young. A female of this description was among them, and a mouse was let into the cage: the female viper distended its jaws, and fixed her eyes steadily upon the mouse as soon as it was introduced, but in all other respects continued motionless: while the other serpents paid no attention to it whatever. The mouse was instantly and violently agitated, but, nevertheless, gradually approached the viper, and at length, of its own accord, entered into its jaws, and was devoured.

Ver. 726. ——*loud of wing,*
Who drives the shadows,——] Thus Dryden:

And sooner than the matin bell was rung,
He *clapp'd his wings* upon his roost, and sung.

Ver. 727. ——*and the lazy dawn*
Wakes with shrill clarion iterated oft.] This part of our poet's description may be agreeably paralleled with a similar description from Shakspeare, in Hamlet, in which the cock is denominated

——the trumpet of the morn;
Who, with his lofty and shrill sounding throat,
Awakes the god of day.

Marchetti has sunk the sublime imagery of the original in a manner I should hardly have expected from a translator of his accustomed accuracy and taste, by rendering it thus:

——con sonora
Voce risveglia ogni animale all'opre,
Wakes, with loud voice, *each animal to work.*

Tenuia; quæ facile inter se junguntur in auris,
Obvia quom veniunt; ut aranea, bracteaque auri.
Quippe et enim multo magis hæc sunt tenuia textu,
Quam quæ percipiunt oculos, visumque lacessunt;
Corporis hæc quoniam penetrant per rara, cientque
Tenuem animi naturam intus, sensumque lacessunt.
Centauros itaque, et Scyllarum membra, videmus,
Cerbereasque canum fauces; simulacraque eorum,
Quorum, morte obitâ, tellus amplectitur ossa:
Omne genus, quoniam passim simulacra feruntur;
Partim sponte suâ quæ fiunt aëre in ipso,
Partim quæ variis ab rebus quomque recedunt;
Et quæ confaciunt ex horum facta figuris.
Nam certe ex vivo Centauri non fit imago;
Nulla fuit quoniam talis natura animaï:
Verum, ubi equi atque hominis casu convenit imago,
Hærescit facile ex templo, quod diximus ante,

Ver. 737. *Now mark while briefly, next, the muse displays*] Having completed the subject of external sensations, our poetic sage now enters boldly upon the more recondite one of internal perception, of imagination and dreams. In doing which, he recurs, with much dexterity, to the accommodating principle he has before so uniformly, and not unsuccessfully applied to an elucidation of the external senses; that, I mean, of a perpetual emanation, from every existing substance. See Note on ver. 41. of the present Book.

Ver. 746. ——*with ease*
Pierce they the porous body,——] If this be difficult to conceive, it is certainly not more difficult than that the effluvium of light should, in a similar manner, be able to pierce all transparent substances; to pass through crystals of a plane surface, with-

Towards ev'ry point, in modes innum'rous press,
Combining soon through ether when they meet,
As the wove woof of spiders, or the threads
Fine-wrought of filmy gold. For slend'rer far
Of these the texture than aught e'er that strikes
Conspicuous on the pupil, since with ease
Pierce they the porous body, reach, recluse,
Th' attenuate mind, and stimulate the sense.
Hence Centaurs see we, Scyllas, and the face
Of dogs Cerberean, or the spectres pale
Of those whose bones the tomb has long embrac'd.
For countless effigies of countless kinds
Float vagrant round us, self-engender'd, now,
In air sublime, now flung from all that lives,
And now combin'd in many a monster form:
For the wild semblance of a Centaur yet
Ne'er flow'd from Centaurs living, nature such
Creating never; but when once in air
A man's light image with a horse's meets,
Quick they cohere, as just maintain'd, since rear'd

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out the least degree of injury, or even deflection; and to convey along with itself to the retina the perfect image of the body from which it is reflected.

Ver. 749. *Hence Centaurs see we, Scyllas, and the face*
Of dogs Cerberean,——] On these imaginary existences, see Note on Book V. v. 896. and following.

Ver. 751. *Of those whose bones the tomb has long embrac'd.*] In the original text thus:

Quorum, morte obita, tellus amplectitur ossa.

Guernier has not much consulted the delicacy of this description in his interpretation of it, which is as follows: "whose bones are rotting in the grave." Des Coutures wanders from the literal sense of the passage, but less offensively: "de ceux que la mort a rendu depuis plusieurs années *à la mere commune des hommes*."

Propter subtilem naturam, et tenuia texta.
Cætera de genere hoc eâdem ratione creantur:
Quæ quom mobiliter summâ levitate feruntur,
Ut prius obstendi, facile uno conmovet ictu
Quæ libet una animum nobis subtilis imago:
Tenuis enim mens est, et mire mobilis, ipsa.
Hæc fieri, ut memoro, facile hinc cognoscere possis;

Ver. 766. *Thus all with ease developes.*——] That the doctrine here elucidated was that of Epicurus, we might farther corroborate, if it were necessary, by a passage in Cicero, which Lambinus indeed has cited for this very purpose. It is thus he writes to his friend Cassius, who was a strenuous disciple of the Epicurean school, Epist. Famil. lib. xv. 16. Fit nescio quid, ut coram, adesse videaris, cum scribo aliquid ad te, neque id κατ' εἰδώλων φαντασιας ut dicunt amici hii novi, qui putant etiam τας διανοητικας φαντασιας, spectris Catianis excitari: "I know not how it is, but whenever I write to you, you seem always present before me; yet not as the mere fantasy of those images your new friends are accustomed to maintain; who deem that even the fantasies of the mind are excited by the spectres so zealously contended for by Catius." This Catius, as we learn both from the present epistle, and more fully still from one of Cassius in reply (ep. 19), was an Epicurean philosopher, and public professor of the Epicurean school, but in no very high degree of credit with either Cassius or Cicero.

And now, admitting the fragility of this theory, to what system shall we betake ourselves in its stead? It is truly astonishing, to behold the variety of hypotheses that, from time to time, have been brought forwards, and how perpetually they have yielded to others of a newer birth; and which, perhaps, have had no superior recommendation than what results from novelty alone.

And first, as to the Platonic system of Ideas. Every material thing that exists, or can exist, has, upon this theory, an eternal and immaterial form of itself existing at the same time: for matter, according to the opinion of Plato, may exist, and did originally exist without form, and form without matter. These eternal and immaterial forms of things he denominated *Ideas*. And the action of all material bodies upon the external senses, he asserted was immediately followed by the self-presentation of these immaterial archetypes to the immaterial mind. Of the external and material world, the mind therefore, strictly speaking, can, upon this hypothesis, know nothing; it has no perception of it whatsoever, and the only objects of its real knowledge are those eternal and immaterial ideas, after the patterns or forms of which the material world was created.

Plato, among the multitude of his disciples, had two of pre-eminent merit, Xenocrates and Aristotle. To Xenocrates this sublime doctrine was sufficiently conspicuous; and he not only taught it with no small degree of reputation in the Academic hall in which he had received his education, but added to its mysticism by the importation of various new dogmas from the fountain of Pythagoras. The acute and subtle spirit of Aristotle, however, was not so easily to be satisfied: he started a variety of unanswerable objections; and finally deserted the Academy, and established a school of his own. In this new institution it was contended, that whatever was possest of form must necessarily be material: the conception of immaterial forms of material substances was declared to be nonsense; and the Platonic doctrine of *ideas* was totally exploded. But what was to be substituted in its stead? In what manner was the mind now to be operated upon so as to gain a knowledge of the existence of external objects? The world of Platonic ideas seems still perti-

Of subtlest texture, and the phantom springs.
Thus spring, too, kindred phantoms, by their make
All volatile, and, with percussion joint,
Rousing the mind, soon rous'd, since rear'd itself
Of subtlest texture, and vivacious most. 765

Thus all with ease developes. As the mind

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naciously to have hovered around Aristotle, in the conception and evolution of his new system: and hence, although he banishes the *name*, without any great variation he retains the *thing*, and determines upon the introduction of phantasms or species in their stead. That is to say, he gives the naked and ideal forms of Plato a corporeal clothing, and hereby makes them perfectly harmonize with the theory which Epicurus was at that very moment teaching at Mitylene, and which he had bottomed upon the theory of Democritus. But Aristotle, who admitted of spiritual intelligences as well as material objects, made an addition to this hypothesis of the atomic founder, and contended, that the intellectual world had its phantasms or effigies, as well as the external or sensible; and that while things sensible are perceived by sensible species, things intellectual are perceived alone by intellectual species. So that we have still the doctrine of emanations, but in a more complex form. The bulk of mankind seems fond of mystery, and this complex doctrine of Aristotle not only gradually gained an ascendancy in the world, but, from about the fifth century of the Christian æra to the age of Des Cartes, flourished in most of the schools of Europe, almost without a competitor. The comprehensive mind of Des Cartes, however, was not to be imposed upon by unmeaning obscurities and philosophical conceits. He was determined to submit every thing to the test of the most rigid investigation, and to disbelieve every thing till he was irresistibly compelled to assent. And the consequence was, a resuscitation of the doctrine of ideas: not, indeed, upon the precise meaning of Plato, but in a sense, if I mistake not, very nearly as incomprehensible, though pretending to a different explanation.

The system of Des Cartes is, with a few shades of variation, the system of Locke; and as the latter has carried it to its utmost degree of perfection, let us, in as few words as possible, comment upon each at the same time. Both philosophers set out with a determination to prove every thing, and to demonstrate the means by which every thing is perceived. The former attacks his own existence, and the latter that of the world around him; and each with a view of evidencing the reality of the objects of their attack: but the former cannot prove his own existence, and is obliged at last to take it for granted; and the latter, instead of ascertaining the existence of an external world, demonstrates, from the principles upon which he reasons, that at least half of what was generally conceived to constitute the world, the secondary qualities of bodies, have no real existence whatsoever, and are nothing more than mere ideas of the mind itself.

Upon neither of these theories do we perceive the objects that surround us, when any impression is made by them upon the external organs of sense, but the mere ideas of those objects alone; and these ideas, not like the ideas of Plato, or the emanations of Epicurus, precise forms of the objects presented, but things that have no resemblance to them whatsoever. The term idea, indeed, is used by Mr. Locke in a very comprehensive sense, to signify "every object of the understanding when a man thinks;" or "whatever it is that the mind can be employed about in the act of thinking." But though, in the prosecution of

Quâ tenus hoc simile est illi, quod mente videmus,
Atque oculis, simili fieri ratione necesse est. 755

this subject, he found that what he denominated the secondary qualities of bodies, as he chuses to call them, as colour, sound, taste, smell, and heat, have no real existence in the bodies themselves that are perceived, which have only a power of exciting such perceptions in the brain, and of course that they exist only in our ideas; yet all the primary qualities of bodies, that is to say, those which mankind apprehend to be absolutely inseparable from bodies themselves, such as solidity, extension, figure, number, motion, and rest,—these he contended to have an actual existence in external objects, and to propagate a resemblance of themselves to the ideas of the mind.

It has fairly and frequently been inquired, what are these ideas, by which we perceive external objects? which are neither mind nor body, but a medium between the two, and which possess in themselves more than half the qualities that are ordinarily attributed to the latter? And whence, again, do we become informed that such secondary qualities of bodies exist in these ideas any more than their primary qualities? Why may not figure, solidity, number, motion, and rest, as fully depend upon ideas alone, as colour, sound, taste, smell, or heat? Bishop Berkeley, therefore, who pursued this subject with a still bolder spirit than Mr. Locke, convinced himself that these primary qualities of the latter philosopher were no more inseparable from bodies than his secondary; that, like the former, they are mere sensations or ideas in ourselves, and that the bodies to which they are supposed to attach, have nothing more than the power of exciting such sensations. Berkeley, therefore, discarded all sensible qualities from external objects, and transferred them to the ideas or sensations of the mind alone. But what was left in the world around him? Nothing whatever; there was no material world at all: the whole which remained was mind and ideas; and he perceived clearly, or so pretended to perceive, that there was no more solidity in the different scenes, events, and persons whom he had formerly supposed to exist around him, than in the different scenes, events, and persons of a dream.

It must have been some consolation to him, however, that he himself did not vanish away in this general disappearance of nature: that he still kept firm possession of his own identity and immaterial spirit. But the very same mode of reasoning that induced him to relinquish the material world, if he had legitimately pursued it to its utmost consequences, would have destroyed the existence, both of his own mind, and his personal identity. And it was thus pursued a short time afterwards by Mr. Hume, and the soul was absolutely swept away, and nothing left behind but impressions and ideas: sensations without a sentient being, which succeed each other with extreme rapidity, and devoid of all necessary connexion; and which, though frequently possessing a most striking similarity, can afford no proof of uniform identity of existence.

Beyond these two last theories it has not been possible to advance, and to correct them has been esteemed a vain attempt. The very principles which have led to such extraordinary conclusions, it has been asserted, must be erroneous; and two distinct and very opposite systems have lately been brought forwards, in which these principles have been totally discarded.

Of these two, the first I shall notice is that of Common Sense, invented about a century ago by the ingenious Buffier of Paris, but principally indebted for its reputation, at present, to the abilities of Dr. Reid, Dr. Beattie, and several other Scottish metaphysicians of high renown, who have improved, and strenuously defended it. Rejecting all knowledge of the mode by which the impressions of objects are made upon the external senses, and perceptions, in consequence, are excited in the mind, but, at the same time, peremptorily denying that either are produced by images or ideas, this theory is built upon the basis of intuitive apprehension. Our perceptions, it is asserted, necessarily imply the belief of the present existence of external objects; and the actual and un-

Sees but the features sight survey'd before,
Each into act some equal cause must prompt.—

compounded existence of matter is accredited, not because it can be proved by argument, but because the constitution of our nature is such, that we must accredit it, and cannot, in our own minds, separate the belief of external objects from our sensations. "We are compelled," says Dr. Reid, "by those original and natural judgments, which are signified by the term common sense, and which are a part of that furniture which nature has given to the human understanding. These are the inspirations of the Almighty no less than our notions, or simple apprehensions: they are a part of our constitution, and the discoveries of our reason are grounded upon them." Inquiry into the Human Mind, ch. vii.

This, it must be confessed, is freeing ourselves from difficulties with sufficient facility; but it is, at the same time, rather cutting the Gordian knot than untying it. That we are possessed of certain intuitive principles of knowledge has been admitted under most theories upon this subject. It is a tenet pointedly inculcated by Mr. Locke, and still more largely illustrated by Dr. Price. But the school before us appears in great danger of extending it too far, and of regarding many things as completely ascertained and established by this intuitive knowledge, or common sense, which, upon a minute investigation, would be found to be positively false. It is undoubtedly easy in reply to the question, how do I know that any thing exists around me? that this colour is blue, and that green? to assert, common sense informs me so. But if this principle of knowledge be, in reality, *common* sense,—a principle *intuitive* and *universal*,—I have a right to expect that it not only informs me so, but that it informs every one else so in the same manner. If, then, I meet with one man who contends that the blue is green, and another, that the green is purple, and a third, that there is nothing exists around me at all, as was maintained, with respect to a material world, by Berkeley and Hume, I am compelled to confess, that my belief upon these subjects, whether right or wrong, is not, strictly speaking, founded upon a principle of common sense. But it would be in vain to pursue this very unsatisfactory theory through all its objections. In avoiding the evils which certainly attend upon that of Mr. Locke, it has introduced difficulties quite as gigantic, and may lead to conclusions still more wild and sceptical than any which have been deduced from the former.

One of the best substantiated theories of mental perception which has ever been communicated to the world, is the associate system of Dr. Hartley: and it is a system which, I believe, was lately gaining ground in this country upon the destruction of all the rest. Like that of Dr. Reid, its grand object is to destroy the doctrine of ideas, never retaining the term but in a figurative sense: but unlike Dr. Reid's, it courts philosophical inquiry, and pretends to an explanation of almost all the phænomena of this comprehensive subject. According to this elegant theory, the nervous fibrillæ of the organs of sense are solid and elastic capillaments, and not, as has been conjectured by many anatomists, tubuli, filled with a peculiar fluid. On the impression of external objects upon these fibrillæ, the whole length of the affected nerve becomes agitated with a vibratory motion, which is hereby propagated immediately to the white medullary substance of the brain, constituting the direct instrument by which the existence of objects is presented to the mind. Every vibration upon the brain leaves behind it a certain mark or vestige of itself, which may figuratively be regarded as a type or image, and, in this sense, be denominated a simple idea of sensation: and the more frequently these vibrations are renewed, or the more vigorously they are impressed, the stronger will be their vestiges or sensible ideas.

By frequent repetition, moreover, these sensory vibrations produce in the medulla of the brain a disposition to vibratiuncles, or miniature vibrations corresponding to the parent impression, and on the existence or excitation of these depend both the imagination and memory.

Nunc igitur, docui quoniam me forte leonum
Cernere per simulacra, oculos quæquomque lacessunt;
Scire licet, mentem simili ratione moveri,
Per simulacra leonum, cætera, quæ videt æque,
Nec minus, atque oculei; nisi quod mage tenuia cernit.
Nec ratione aliâ, quom somnus membra profudit,
Mens animi vigilat, nisi quâ simulacra lacessunt
Hæc eadem nostros animos, quæ, quom vigilamus:
Usque adeo, certe ut videamur cernere eum, quem,
Redditâ vitâ, jam mors, et terra, potita est.

Any orders of sensations, by being associated together a certain number of times, obtain such an influence over each other, that either of them, when impressed alone, possesses a power of exciting the vibratiuncles or ideas of all the rest. These associations are divided into synchronous and successive; and all our simple and complex ideas are ascribed to the influence of this principle, or habit. The sight of one part of a large building suggests instantaneously the idea of the remaining parts by a synchronous association of the parts; and the sound of the words, which begin a familiar sentence, brings to remembrance the remaining words in their order, by successive association.

This theory is highly ingenious, and strictly philosophical; but it necessarily flows from it, that all our apprehensions, our judgments, our volitions, and our actions, are derived from external and mechanical impulse; that man is, in consequence, little better than an automaton, and scarcely to be regarded as an accountable being. This objection to the Hartleian hypothesis has been often urged against it, and has met with many able and elaborate answers from its advocates; but none, in my opinion, that have altogether removed the difficulties which seem essential to its very constitution. There is another difficulty, moreover, under which it labours at present, in consequence of the discovery of galvanic aura, and of its close connexion with the nervous system; and which, if not fatal to its existence, renders it at least necessary that the whole should be re-modelled, and adapted to the anatomical facts and experiments of the day. It is now clearly ascertained, that the nervous fibrillæ are *not* solid and elastic capillaments, but galvanic tubuli; that sensation is *not* propagated by vibrations and vibratiuncules, but by the transmission of an invisible fluid propelled through the concavity of the nervous filaments with a velocity that cannot be measured. And hence the *associate* system, as it stands at present, admitting it to be philosophically correct, is anatomically erroneous; and that with respect to several of its fundamental and most important principles.

After such incongruities and self-contradictions, it should seem almost idle to attempt any thing new: but the mind is fond of novelty, and a different theory of mental perception has very lately been started in Germany, under the name of the *Critical* or *Transcendental Philosophy*, an ingenious but recondite invention of M. Kant of Königsburg. Having already, however, given a brief account of the rise, progress, principles, and present state of M. Kant's hypothesis, towards the close of the Appendix to the preceding Life of Lucretius, I shall not revert to it on

Since the fierce lion, as the muse has taught,
Sight, then, surveys from semblances alone,
Nought but mere semblances the mind can rouse;
Hence seen the same, or but attenuate more.
Thus only, when the limbs dissolve in sleep,
The wakeful spirit of the mind descries
Trains of unreal objects, mov'd throughout
By the same images the day displays;
So mov'd that those oft obvious seem to spring
Whom long the grave has folded in its grasp:

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the present occasion; but proceed to observe, that the volumes already published by the French National Institute furnish us with several other theories upon the same subject, of which the most compact, and, at the same time, the most profoundly studied, appears to be that of M. Cabanis, (Tom. i. Mor. et Polit.) which is, nevertheless, little more than an improvement upon the prior hypothesis of M. Condillac, as communicated in his very excellent Traité des Sensations. Upon the theory of M. Cabanis, perception, instinct, thought, are but so many modifications of the faculty of sensation. But what, at length, is the cause of this faculty of sensation? "This is a question," observes he, at the termination of his very long, and very elaborate memoir, "which no philosopher will think of proposing. We only acquire ideas of objects by the phænomena they present: their nature or their essence can only exist, as to ourselves, in the common mass of such phænomena. The ultimate laws of nature, as well as their causes, must for ever remain inscrutable to human investigation. In a word, they *are* because they *are*: and we ought no more, at the present day, to attempt an explanation of *sensation* in animal nature, than of *attraction* in the nature of atoms."

Ver. 774. ——*spirit of the mind*——] A poetic pleonasm, highly elegant and forcible in delineating the superlative degree either of qualities or things. In the original, *mens animi*, as if he had said "the purest and most volatile part of the soul: that which is still awake and attentive, when all the grosser faculties of the animal frame are sunk in profound sleep." Hence translated by Marchetti, but, I think, with much loss of energy:

Della mente *il vigor*.

In Book VI. v. 1128. we meet with the same phraseology:

The mind's pure spirit all-despondent rav'd:

And not dissimilar hereto, Book III. v. 285:

And lives as soul of e'en the soul itself;

to the Note on which verse the reader may turn for a variety of parallel idioms. The chemists of the present day adopt a similar mode of expression in their terms, *spirit of wine*, *spirit of ether*, *spirit of alcohol*, meaning hereby the purest and most volatile part of these volatile substances. See, also, Note on Book V. v. 155. where the same figure is again resorted to.

Hocc' ideo fieri cogit natura, quod omnes
Corporis obfectei sensus per membra quiescunt,
Nec possunt falsum veris convincere rebus.
Præterea, meminisse jacet, languetque sopore ;
Nec dissentit, eum mortis letique potitum
Jam pridem, quem mens vivum se cernere credit.
Quod super est, non est mirum, simulacra moveri,
Brachiaque in numerum jactare, et cætera membra :
Nam fit, ut in somnis facere hoc videatur imago.
Hoc, ubi prima periit, alioque est altera nata
Inde statu, prior heic gestum mutasse videtur.
Scilicet id fieri celeri ratione putandum est :
Tanta est mobilitas, et rerum copia tanta,
Tantaque sensibili quo vis est tempore in uno
Copia particularum, ut possit subpeditare.

Multaque in hiis rebus quæruntur, multaque nobis
Clarandum est, plane si res exponere avemus.
Quæritur in primis, quâ re, quod quoique lubido
Venerit, ex templo mens cogitet ejus id ipsum.

Ver. 787. *Or trip their frolic feet to num'rous time.*] The following description of Gray, in his Progress of Poesy, is too exquisite as well as too apposite not to be noticed in this place :

With antic sports, and blue-ey'd pleasures,
Frisking light in frolic measures,
Now pursuing, now retreating,
Now in circling troops they meet ;
To brisk notes in cadence beating
Glance their many-twinkling feet.

Ver. 788. *For the light image stays not, but flows on*
In streams successive ;——] A doctrine more fully illustrated in his philosophy of mirrors. See ver. 335. of this Book.

A creed e'en urg'd by nature, since, profound,
Through the still frame then slumbers every sense,
Void of all power to mark the true from false;
Nor rouses the dull memory to clear
The fancied scene, or prove the forms we see
Erewhile fell victims to oblivious fate.—
Nor wond'rous deem it that such forms should move,
Or wave their hands, as dreams full oft disclose,
Or trip their frolic feet to num'rous time.
For the light image stays not, but flows on
In streams successive; hence when this to that
Yields of diverse arrangement, from the change,
Rapid as thought, the first seems moving sole.
So vast their powers of action; such the stores
Of things create, the countless phantoms such
Flung through each moment's least capacious point.
Yet many a question themes like these excite,
Deep thought demanding ere illumin'd clear.
Whence springs it that the mind, with instant haste,
Thinks on whate'er the wayward will resolves?

Ver. 792. *So vast their powers of action; such the stores*] The original text of this, and the two ensuing verses, are rejected from all our common editions, but without any warrant whatever. There is not an ancient copy or manuscript, in which they do not appear, and from the purity of their style, as well as their appropriate application, they ought, undoubtedly, to form a part of the text..

Of the translators, Marchetti and des Coutures are the only ones who have taken any notice of them: but even the former has misconceived, or I am much mistaken, the meaning of the last verse:

Tanta mobili son gli spettri, e tanta
E' la lor copia, e così grande il numero
Delle minime parti d'ogni tempo.

Anne voluntatem nostram simulacra tuentur;
Et, simul ac volumus, nobis obcurrit imago?
Si mare, si terram, cordi est, si denique cœlum,
Conventus hominum, pompam, convivia, pugnas;
Omnia sub verbone creat Natura, paratque?
Quom præsertim aliis eâdem in regione, locoque,
Longe dissimileis animus res cogitet omneis?
Quid porro, in numerum procedere quom simulacra
Cernimus in somnis, et mollia membra movere;
Mollia mobiliter quom alternis brachia mittunt,
Et repetunt oculis gestum pede convenienti?
Scilicet arte madent simulacra, et docta vagantur,
Nocturno facere ut possint in tempore ludos?
An magis illud erit verum, quia tempore in uno,
Consentimus id, ut quom vox emittitur una,
Tempora multa latent, ratio quæ conperit esse?
Propterea fit, utei quo vis in tempore quæque
Præsto sint simulacra, locos in quosque, parata:

Ver. 808. ——*and the foot*
To foot symphonious, exquisitely true?] Our poet appears to have had in his recollection the inimitable description of the ballet danced at the court of Alcinous; a ballet which, in the grace and agility of its performers, seems to have been by no means inferior to that exhibited in the modern opera.

Πεπλεγον δε χορον θειον ποσιν· αυταρ Οδυσσευς
ΜΑΡΜΑΡΥΓΑΣ θηειτο ΠΟΔΩΝ θαυμαζε δε θυμω.
Od. Θ. 265.

Light bounding from the earth, at once they rise,
Their feet, half viewless, quiver in the skies:
Ulysses gaz'd, astonish'd, to survey
The glancing splendours as their sandals play.
Pope.

Ver. 812. *Or flows it not much rather that each point*] The original, corresponding to this, and the four following verses, has a degree of obscurity, probably the effect of erroneous transcription,

If heaven the heart, if earth, or main, possess,
Pomps, spectacles, or senates, feasts, or fights,
Does Nature then her images create
Prompt to the moment? whence that mortals plac'd
In the same country, in the self-same spot,
On different themes employ the thoughtful mind?

Whence, too, those graceful attitudes, in turn,
The changeful phantoms oft in dreams disclose?
The flexile arm that, through the measur'd dance,
To arm voluptuous answers? and the foot
To foot symphoneous, exquisitely true?
Taste, then, the phantoms science? are they taught
Thus loose to wanton mid the night's dead hours?
Or flows it not much rather that each space
Of time minutest, e'en while the fleet lip
Sounds but a syllable, of parts consists
Minuter still, within whose rapid reign
Rush they in swarms, towards every point propell'd?

---

that renders it doubtful, in the minds of many interpreters, what the poet intended. Some have, therefore, omitted the passage altogether; and others have attempted a variety of emendations, but with very little success. I have given the text the meaning which it appears to me to possess, without leaning to any amendment whatever.

The Baron des Coutures has understood the passage in the same manner: "On bien ne sera t-il pas plus veritable, que dans le tems que nous exprimons nôtre pensée par quelque voix, il y a plusieurs instans cachez dans l'espace de ce tems, par le moyen desquels l'agilité des images aussi bien que leur ecoulement universel, fournit en quelque tems que ce soit, de quoi remplir la varieté de la pensée."

Ver. 817. *So vast their powers of action; such the stores*
Of things create.——] The Latin text corresponding to the remainder of this second verse, and

Tanta est mobilitas, et rerum copia tanta:
Hoc, ubi prima periit, alioque est altera nata
Inde statu, prior hcic gestum mutasse videtur.
Et, quia tenuia sunt, nisi quæ contendit, acute
Cernere non potis est animus; proinde omnia, quæ sunt
Præterea, pereunt, nisi quæ ex sese ipse paravit.
Ipse parat sese porro, speratque futuram,
Ut videat, quod consequitur, rem quamque: fit ergo.

Nonne vides, oculos etiam, quom, tenuia quæ sunt,
Cernere cœperunt, contendere se, atque parare;
Nec sine eo fieri posse, ut cernamus acute?
Et tamen in rebus quoque apertis noscere possis,
Si non advortas animum, proinde esse, quasi omni
Tempore semotum fuerit, longeque remotum.
Quur igitur mirum est, animus si cætera perdit,
Præter quam quibus est in rebus deditus ipse?
Deinde, adopinamur de signis maxuma parvis,
Ac nos in fraudem induimus frustraminis ipsei.
Fit quoque, ut interdum non subpeditetur imago
Ejusdem generis; sed femina, quæ fuit ante

---

the two that follow, are seldom inserted in any modern edition, although they are uniformly to be met with in the old copies.

Even Marchetti has omitted them, and at the same time misconceived the idea of the poet in the verse that precedes, and which introduces this note:

So vast their powers of action; such the stores
Of things create. And hence when this to that
Yields of diverse arrangement; from the change
The first alone seems moving to the sight.
Then, too, so fine their texture, that the mind,
Save when profound it pries, their sep'rate forms
Can ne'er distinguish; hence, unnotic'd, waste
Those the dull mind prepares not to survey.
For thus prepares it ceaseless, and expects
The coming vision, hence survey'd alone.
E'en see'st thou not the pupil, when it first
Kens some fine object, all its orb contracts,
And strains ere yet the figure full disclose?
Thus, too, in scenes more obvious, if thy soul
Thou bend not to the vision, it remains
As though from thee far distant and disjoin'd.
What wonder each light image, then, should die
Viewless, the mind ne'er rouses to survey.
Then things minute, too, large full oft we deem
Wide wand'ring from the fact, and self-deceiv'd.
And oft a form the present phantom wears
Unlike th' anterior, woman now, and now

Tanta è la loro agilitate, e tanta
E' la lor copia.

In the original:
Tanta est mobilitas, et [illegible]

In manibus, vir utei factus videatur adesse:
Aut alia ex aliâ facies, ætasque, sequatur:
Quod ne miremur, sopor atque oblivia curant.
Illud in hiis rebus vitium vehementer inesse
Efugere errorem, vitareque præmetuenter,
Lumina ne facias oculorum clara creata,

Ver. 842. *Yet fly abhorrent, here, with vigour fly*] The dogma the poet is now about to introduce, has given great umbrage to Lactantius, and a host of annotators who have followed him, from an idea that it is purposely designed to deny the existence of a Providence, and the intentional mechanism of the human frame. "Quid ais, Epicure?" says he, alluding to a parallel passage in the writings of this founder of the sect, "non sunt ad videndum oculi nati? Cur igitur vident. Postea, inquit, usus eorum apparuit: videndi ergo causâ nati sunt.—Sed videlicet qui summam veritatis amisit, semper erret necesse est." And thus we frequently find it in modern literature: an erroneous interpretation is first given to a particular passage, and the author is next abused for ideas that never entered his mind.

However common may be the belief, that Epicurus inculcated the dogma that all things originally arose, and still continue to arise fortuitously, Newton himself never contended more strenuously for the existence of a system of permanent and invariable laws, by which all nature is regulated, than both himself and his poetic disciple before us, nor laboured more ardently to establish the proofs of such existence. It is not here asserted that the external organs of sense were not created for appropriate uses, but that they do not indicate their own uses. And now let me ask, how far is such assertion inconsistent with the theory of Locke, of Hartley, or of any other philosopher of high repute among Christians? or, rather, without being systematized by any school, how far is it inconsistent with the testimony of Nature herself, and the facts and experience of every day? The eyes see things, undoubtedly, the moment an infant is born—but do they indicate the use of seeing? Are the hands acquainted with the power of touching and handling? Do the legs support the body, or even intimate that it is to be supported by them? Can the tongue speak?—Is language in reality natural to us, or is it not an artificial acquisition? In effect, we know not, from its own intimation, the use of any one organ of the human body: we find ourselves possest of a great and ample variety of organs; but our own invention is appealed to with respect to these as with respect to every thing else; it is experience, observation, and habit alone,—our own personal exertion, and the education we receive, that teaches us how to employ, to any degree of advantage, the faculties with which we are gifted. But if the proposition advanced by our poet, that no organ is naturally or intuitively apprized of its own use, be objected to by such casuists as impious and irreligious, what would they have said if he had taken the converse of the question, and maintained, that every organ of the body was naturally acquainted with its own purport and design from the very moment of its birth? Here, indeed, they might have found ample room for their favourite charge of impiety; but it is neither candid nor philosophical to impute the same error and irreligion to converse and opposite tenets. The mere man of nature, the torpid and indolent savage, in many instances, never uses more than half the organs with which he is endowed; and it depends upon the climate he inhabits, and the mode of life he pursues, as to what organs he may cultivate, and what he may relinquish. Even

The bolder sex, or shap'd with different age,
And features fresh, while still oblivion deep,
And languid rest restrain us from surprize.
Yet fly abhorrent, here, with vigour fly
Their creed who hold that every organ sprang
To use self-destin'd: that the pupil rose

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among civilized nations, with all the polish and experience we possess in the present day, we do not know the full scope and power of all our external organs. There is a vast variety of muscles bestowed upon us which, from want of use alone, are become totally incapable of exertion, and all the energies of which we only know from the few who occasionally put them to the test. The toes, it may be said, were not given us to write with, nor the hands to walk upon: but the fact is, that both were given us to make the best possible improvement of: and we well know, from persons defective in their limbs, that the toes may be inured to writing as well as the fingers; and that the hands and arms may become very essential instruments in the action of walking, where the feet are imperfect or wanting. "Of the different members or parts of the body," observes Cicero, "some seem to be given us by nature for use, as the hands, the legs, and the feet; and as to our internal organs, let physicians inform us of their vast importance. There are other members, however," continues he, "that appear of no real utility, and as though formed for ornament alone; such is the tail to the peacock, the many-coloured feathers to the pigeon, and the nipples, and the beard to men." De Fin. lib. iii. It is probable, however, that every animal appendage, as well as organ, is designed for some intrinsic *use*, although we have not yet learnt the use for which it was intended. Of what *ornament* to the male sex can we reckon the beard, from which we are daily endeavouring to free ourselves as an inconvenience and a disfigurement? or the nipples, which all nations, who have emerged from a savage life, have uniformly concealed by drapery? and as to many of the internal organs of the body, the appeal to physicians is in vain, even in the present day. We know, perhaps, the use of the greater number, but by no means of all. We have learnt much concerning the office of the brain; and we certainly, in this country, know the use of the stomach still better: but of the use of the spleen, the pancreas, or even the liver, we are, to the present moment, totally ignorant. That they were created for appropriate uses, it would be absurd to deny; but they do not indicate those uses to us. The fact is, with respect to ourselves, as well as with respect to every thing else, the means are put into our possession, but we must exert ourselves to find out the ends; or, in the language of our poet that immediately follows:

——nought so knows its office as to act
When first produc'd, but all produc'd, alone
Learns it progressive.

The translators, throughout the whole passage, having been uniformly misled by the earlier scholiasts, have followed their ideas, and erred in their respective versions.

Ver. 844. *To use self-destin'd:*——] Such might have been the opinion of Democritus, and every other philosopher who, like him, believed in the eternal intelligence of material atoms, and the formation of the world, and its various inhabitants, from the co-operation of such intelligent corpuscles. To them it was necessary to prove, that no organ whatever was intuitively acquainted with the office it was created to perform;—that every one was given to us to

Prospicere ut possimus; et, ut proferre viaï
Proceros passus, ideo fastigia posse
Surarum ac feminum, pedibus fundata, plicari:
Brachia tum porro, validis ex apta lacertis,
Esse manusque datas, utrâque a parte ministras,
Ut facere ad vitam possemus quæ foret usus.
Cætera de genere hoc, inter quæquomque pretantur,
Omnia pervorsâ præpostera sunt ratione:
Nihil ideo quoniam natum est in corpore, ut uti
Possemus; sed, quod natum est, id procreat usum.
Nec fuit ante videre oculorum lumina nata;
Nec dictis orare prius, quam lingua creata est:
Sed potius longe linguæ præcessit origo
Sermonem; multoque creatæ sunt prius aures,
Quam sonus est auditus; et omnia denique membra
Ante fuere, ut opinor, eorum quam foret usus:
Haud igitur potuere utundi crescere caussâ.
At contra conferre manu certamina pugnæ,
Et lacerare artus, fedareque membra cruore,
Ante fuit multo, quam lucida tela volarent:
Et volnus vitare prius natura coëgit,
Quam daret objectum parmaï læva per artem.

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be employed to the best advantage of which it is capable; and that its real, and most appropriate use, like every other kind of knowledge, is alone to be ascertained by imitation, experiment, and habit. Against such philosophers, the argument is forcible and ingenious: against those of any other persuasion it will not apply.

Conscious of vision; that the legs, the thighs
On the firm foot uprear'd their columns, vers'd
Previous in paces; that the flexile arm
Hence nerv'd with strength its muscles; and the hands
Hung on each side, the messengers of life.
This, and whate'er such sophists else affirm
Is futile all, preposterous, and wild.
For nought so knows its office as to act
When first produc'd, but all produc'd alone
Learns it progressive. The nice power to see
Liv'd not before the eye-ball; to debate
With graceful speech before the tongue was form'd,
The tongue long first created; nor to hear
Ere rose the sense of sound; nor aught besides
Of organ could anticipate its use.
Hence urg'd by use, no organ ever sprang.

Wars, we admit, with all their ills, began
And savage blows were dealt, and tides of blood
Flow'd forth obscene, ere yet the lucid spear
Was hurl'd indignant; and to fly its force
Preceded long the left hand's sturdy shield.

Ver. 863. ——*the lucid spear*] Hence, as Mr. Wakefield observes, in all probability, the same image in Virgil:

Gnossia bina dabo lævato *lucida* ferro
Spicula, Æn. v. 306.
Two lucid spears I'll give of polish'd steel,
The boast of Gnosus.

Scilicet et fessum corpus mandare quieti,
Multo antiquius est, quam lecti mollia strata:
Et sedare sitim prius est, quam pocula, natum.
Hæc igitur possunt utundi cognita caussâ
Credier, ex usu quæ sunt, vitâque, reperta:
Illa quidem seorsum, sunt omnia quæ prius ipsa
Nata, dedere suæ post notitiam utilitatis:
Quo genere in primis sensus, et membra, videmus.
Quâ re etiam atque etiam procul est, ut credere possis,
Utilitatis ob obficium potuisse creari.
Illud item non est mirandum, corporis ipsa
Quod natura cibum quærit quoiusque animantis.
Quippe et enim fluere, atque recedere, corpora rebus
Multa, modis multis, docui: sed plurima debent
Ex animalibus; hæc quia sunt exercita motu:
Multaque per sudorem ex alto pressa feruntur;
Multa per os exhalantur, quom languida anhelant.
Hiis igitur rebus rarescit corpus, et omnis
Subruitur natura: dolor quam consequitur rem.
Propterea, capitur cibus, ut subfulciat artus,
Et recreet vireis inter datus; atque, patentem

Ver. 866. *Thus, too, repose the weary members claim'd,*
Long ere the down display'd its soft expanse;] In the original text thus: v. 846.

Scilicet et fessum corpus mandare quieti,
Multo antiquius est, quam lecti mollia strata.

And thus in the Italian of Marchetti:

Thus, too, repose the weary members claim'd,
Long ere the down display'd its soft expanse;
And the parch'd lip was slak'd ere goblets rose.
Doubtless such instruments from use foreseen
Were gradual fram'd, as life and nature call'd,
But nought besides; for all created else
First sprang, and then their proper use explor'd,
The senses chief, and active limbs of man.—
Hence far the creed reject, then, that affirms
These e'er produc'd from office pre-conceiv'd.
Nor is it wond'rous that each form that breathes
Should, from its nature, need diurnal food:
Since, as we erst have taught, in many a mode
Full many an atom flies from all create;
From ranks percipient most, by toil fatigu'd.
For ceaseless vapour here the skin bedews,
Flung forth profound, and quick the labouring lungs
Part with their vital spirit; hence the frame
Sinks all exhausted; faintness preys profuse
O'er every power, and ruin stares around.
So foods are claim'd the languid limbs to brace,
To fill with strength recruited, and appease

Ed è molto più antico il dar quiete
Alle membra già stanche, *o sulla dura*
Terra, o sull' erbe molli all' aria aperta,
Che il nutrirne a grand' agio in piume al rezzo.

Per membra ac venas, ut amorem obturet edundi.
Humor item discedit in omnia, quæ loca quomque
Poscunt humorem: glomerataque multa vaporis
Corpora, quæ stomacho præbent incendia nostro,
Dissupat adveniens liquor, ac restinguit, ut ignem;
Urere ne possit calor amplius aridus artus.
Sic igitur tibi anhela sitis de corpore nostro
Abluitur; sic expletur jejuna cupido.
Nunc, quî fiat, utei passus proferre queamus,
Quom volumus, vareque datum sit membra movere:
Et, quæ res tantum hocc' oneris protrudere nostri
Corporis insuerit, dicam: tu percipe dicta.
Dico, animo nostro primum simulacra meandi
Adcidere, atque animum pulsare, ut diximus ante;
Inde voluntas fit: neque enim facere incipit ullam
Rem quisquam, quam mens providit, quid velit, ante:
Id, quod providet, illius rei constat imago.
Ergo, animus quom sese ita conmovet, ut velit ire,
Inque gredi; ferit ex templo, quæ in corpore toto
Per membra, atque artus, animaï dissita vis est:

Ver. 901. *Beset, and strike the mind; hence springs the will*] These images beset and strike the mind, and, of course, excite the will, upon the Epicurean system, in two ways: First, by their impinging upon the external organs of sense, whence they are conveyed, through the medium of the nerves, to the mind; and secondly, by entering the porous frame of the body, and producing an impulse upon

The craving hunger that subdues the soul.
So, too, the goblet spreads its liquid stores
Where'er those stores are sought, with grateful draught
Quenching the fiery stomach, and absorb'd
Through all the members, fresh'ning as it flows.
Hence dies the raging hunger; and the thirst,
Panting no more, is drown'd in fluent bliss.

Now next unfold we, thou the doctrine mark,
How the firm foot advances at our will?
Whence draw the limbs their motion? and within
What this strange power the body's bulk that drives?—
First, then, we hold—a precept urg'd before—
That the light images that rove around
Beset, and strike the mind; hence springs the will
Determin'd instant; for no mortal aught
Can e'er commence but what th' interior mind
Wills, and decides; and what the mind thus wills
Th' assailing image governs by its form.
So when the mind, thus rous'd, resolves to walk,
Quick through the total soul, the soul diffus'd
O'er all the system, the commotion felt

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the naked form of the mind itself. Perceptions excited by the former mode of action correspond with the simple ideas of Locke, and the primary vibrations of Hartley: while those, impelled by the second, are synonymous with Locke's ideas of reflection, and Hartley's vibratiuncles: they are the immediate cause of memory and imagination.

Et facile est factum, quoniam conjuncta tenetur.
Inde ea proporro corpus petit; atque ita tota
Paullatim moles protruditur, atque movetur.

Præterea, tum rarescit quoque corpus; et aër
Scilicet, ut debet, qui semper mobilis exstat,
Per patefacta venit, penetratque foramina, largus;
Et dispargitur ad parteis ita quisque minutas
Corporis: heic igitur rebus fit utrimque duabus,
Corpus ut, ac navis velis ventoque, feratur.
Nec tamen illud in hiis rebus mirabile constat,
Tantula quod tantum corpus corpuscula possunt
Contorquere, et onus totum convortere nostrum.
Quippe et enim ventus, subtili corpore tenuis,
Trudit agens magnam magno molimine navem;
Et manus una regit quanto vis inpete euntem;
Atque gubernaclum contorquet, quo lubet, unum:
Multaque per trochleas, et tympana, pondere magno
Conmovet atque levi substollit machina nixu.

Ver. 916. *And hence from two-fold force, as sails the bark*
With wind and canvas,——] Gassendi, in some moment of unaccountable miscomprehension, would have it that wind and canvas form not a two-fold force; and immediately proposes for *velis ventoque*, the variation of *remis ventoque*: a lection which Creech has actually adopted in his version:

——both these things combin'd,
Force on the limbs, as ships both *oars* and wind.

And the commentator upon Creech applauds him highly for having thus "followed the *judicious* conjecture of Gassendi, for sails and wind are in effect but *the same thing*." This *judicious conjecture*, I am very glad to find, however, has hitherto found its way into no edition or version, excepting this of Creech. Instead of being *in effect the same thing*—they are, *in effect*, two distinct *powers* or *forces* co-operating to produce the same result.

It spreads percussive, spreads with instant ease,
Since close the bond between them; and, in turn,
Urg'd by the soul, the body final moves,
Feels the propulsion, and its power obeys.
Then, too, the frame expands, and the light air
All volatile, through every path, and pore,
Each aperture minutest, ampler flows;
And hence from two-fold force, as sails the bark
With wind and canvas, man majestic moves.

Nor strange conceive it that such trivial powers
Should turn the body, and its bulk direct.
For the pure gale, of subtlest atoms rear'd,
With force immense the mightiest ship propels;
While one light hand, one slender helm with ease
Guides its vast burden o'er the bending main.
And, arm'd with wheels, and pullies, the firm crane
Lifts loads at will, the groaning ground that crush.

Ver. 922. ——*one slender helm with ease Guides its vast burden o'er the bending main.*] To the same effect, as Mr. Wakefield has observed, is the following observation of St. James, Ep. iii. 4. "Behold also the ships which, though they are so great, and are driven of fierce winds, yet are they turned about with a very small helm, whithersoever the governor listeth."

Ver. 924. ——*the firm crane Lifts loads at will, the groaning ground that crush.*] We may hence collect some idea of the mercantile, as well as mechanical powers of the ancients. As to the latter, indeed, the perfection they attained is truly stupendous, and altogether unrivalled in modern times. We have no conception of the means by which the Egyptians were able to hew out, transport for many hundreds of miles, and elevate to the heights they at present occupy, those enormous stones which are found in the largest of the

Nunc, quibus ille modis Somnus per membra quietem
Inriget, atque animi curas e pectore solvat,

pyramids of Egypt, many of which, according to Herodotus, are not less than thirty feet on every side: those immense columns, formed each of them from a single stone, although not less than seventy feet in height, which constituted a part of the stupendous and magnificent palace near the cataracts; of which columns there were not fewer, throughout the whole avenue, than between five and six thousand: those stupendous temples, which were formed of a single rock of marble or granite, and, transported in one undivided piece down the Nile from the mountains of Arabia, to Thebes, Memphis, Tentyra, and other cities. But, still less, have we any conception of the vast and tremendous mechanical powers employed by Archimedes during the siege of Syracuse, by means of which he completely baffled for three years, and would have done so for ever, had it not been for a stratagem, against which he could not possibly be on his guard, the whole power of the Roman republic, and the talents of one of her most celebrated generals. These balistæ, or projecting machines, were so artfully concealed behind the walls of the city, that the enemy knew not in what direction to attack them, or to avoid the effects of their fury. In reality, they were so dexterously contrived, that they acted equally in every direction, and at every distance, so that when Appius made the assault by land, with the whole of his army, the posterior files, as well as the foremost, were alike overwhelmed with unceasing showers of darts and flints, against which it was impossible to defend themselves. It was in vain, that the assailants persevered in drawing their mantelets and covered galleries under which they were accustomed to work their battering rams, near the foot of the wall: for when, at length, after infinite fatigue, and loss of men, they had thus far obtained success, this inimitable engineer discharged such immense beams and masses of rock upon them in a perpendicular line, as crushed their covered waggons, and broke their battering rams to atoms. If any one, braver than the rest, ventured to advance nearer than Archimedes chose, towards the ramparts, hooks of iron descending suddenly from above, caught hold of his clothes, or grasped him round the body, and whirling him into the air, dashed out his brains by the fall. The Roman soldiers were at length so completely terrified, that if they merely perceived on the walls a small piece of cord or wood, they fled with all their might, believing that Archimedes was once more about to open some dreadful machine against them.

Marcellus, in the mean time, who superintended the fleet, was in a still worse situation: for his ships were assailed, whether immediately under the walls, or at a distance, with such immense craggs and showers of darts, that the stoutest of his quinqueremes could not withstand the assault, and his sailors became quite dispirited by the certain destruction with which every attack was accompanied. It was at this time the consul invented an immense machine to counteract the mechanism of Archimedes, and in which he fully confided for success. He chained together sideways, in the strongest manner he was able, eight of his stoutest gallies of different lengths, hereby incorporating them into one moveable bridge, which was to be rowed by the oars of the extreme gallies alone. On this powerful basis he raised a structure of a height superior to that of the towers of the Syracusan ramparts, at the summit of which was a platform, capable of containing a vast body of soldiers, and protected by parapets both in front and on either side. This machine, which from its form he called a sambuca, after the labour of many months, and the expenditure of an incredible sum of money, he at length completed; it was manned; and the object of Marcellus was to pilot it to the base of that part of the circumvallation which defended Acradina: it approached slowly on account of its weight and bulk, and the fall of Syracuse appeared irremediable. Archimedes, however, did not think it so: he suffered it quietly to advance within his own reach, and then began to bombard it by the incessant discharge, from one of his engines, of a vast rock of a weight not less, according to Plutarch, than ten quintals or talents, which at one hundred and twenty-

Now by what means soft SLEEP bedews the limbs,
And from the mind drives every carking care,

five pounds each quintal averdupois, is equal to the enormous sum of twelve hundred and fifty pounds for every rock. These falling upon this wonderful machine, broke its supports, divided its gallies, and battered the whole sambuca to pieces. At the same time, of the single gallies that attended on the expedition, many were totally destroyed, or completely disabled by assaults from other balistæ, while others, again, unexpectedly clasped hold of by prodigious crows with iron claws, fastened to a long chain, directed by very ponderous levers, were either turned directly topsy-turvy, whirled into the air, and again dashed down so forcibly as to bulge without redress, or were rapidly dragged towards the shore, and broken to pieces against the points of the rocks which projected under the walls. Of these stupendous engines, notwithstanding many valuable improvements in the science of mechanics, we have no possible conception: and the modern engineer, however practically acquainted with the force of gunpowder, must still contemplate their effects with astonishment. See Note on Book VI. v. 333.

On account of our more correct ascertainment of the figure of the earth, and the greater extent of our voyages, the science of navigation is certainly better understood at present than in any prior period. Navigation, nevertheless, and particularly that branch of it which extends to the construction of ships, was by no means neglected among the ancients; and M. Le Roi, whose judgment upon this subject will be disputed by no one, has written an express dissertation, introduced into the Memoirs of the National Institute (l' An. 4. Literat. et Beaux-Arts, tom. I.) to prove that we might still obtain many advantages by imitating, to a greater extent, the vessels of the Roman republic. This dissertation is to consist of three distinct memoirs, of which the first only has hitherto been presented to the public. In this first memoir, the celebrated author has clearly ascertained, that the corvus, or crow of Duillius, an instrument like that of Archimedes, but of considerably less power, designed for the purpose of grappling with an antagonist ship, and of affording at the same time a kind of bridge or gallery into her, by which she may readily be boarded, might be successfully employed against corsairs, and similar pirates. In the second memoir, he proposes to demonstrate, that in more nearly assimilating some of our vessels to the form, the proportion, and the tackle of those of the ancients, and in allotting them the general qualities of the trading-vessels of the time of Diodorus Siculus, our coasting navigation, and, consequently, our commercial ports, would be largely benefited. In his third paper, he designs to prove, that the gallies of the second class employed by the ancients in their naval armaments, and especially that description of vessels in common use in India till the commencement of the fifteenth century, exhibited a kind of type of the *diligences* made use of at Havre, and may be employed in a manner highly beneficial and lucrative for the commerce and supply of Paris.

To these advantages might have been added another, far more general, and infinitely more important than all the rest—an advantage which seems to have afforded all the utility of copper-sheathing, without incurring a hundreth part of its weight or expence—I mean the mode of encaustic painting, invented for the express purpose of preserving the timber of ships, and which Pliny informs us so completely succeeded, that it was equally proof against the sun, the sea-water, and the winds. "Quæ pictura," says he, xi. 41. "in navibus, nec sole, nec sale, ventisque corrumpitur." This important invention, unfortunately for the commercial world, is completely lost; and we possess but little hope of recovering it. It consisted, according to the same author, in the use of wax, dissolved over a fire, and applied by a brush: the plan thus far described, is extremely simple, but though Pliny says nothing further, this could not be the whole of it—for he expressly declares it to have been an encaustic mode. "Hoc tertium adcessit" (says he) (viz. *genus incausti)* "resolutis igni ceris penicillo utendi." But the mode thus described can in nowise be considered as *encaustic*, or *burnt in*; and it is probable, therefore, that, superadded to the account thus presented to us, the exterior wood-work

Suavidicis potius, quam multis, versibus edam;
Parvus ut est cycni melior canor, ille gruum quam

of the vessel itself was at the same time *fired* in some manner, to which we are now strangers. Our neighbours on the coast of France, and particularly M. le Comte de Caylus, have paid much attention to this subject; and the latter has even flattered himself with a re-discovery of the true encaustic art of ship-painting. The plan, however, prescribed by this ingenious writer, is not, strictly speaking, *encaustic*, and probably does not possess the preservative character represented by the Roman historian. M. de Caylus's mode is, in effect, nothing more than the application of a mere water-colour, afterwards covered over with a layer of wax and oil, of a due consistency for the use of the brush; and applied to the wall or substance, that is to be covered, in an iron vessel, so far heated with ashes of nut-galls as to make the wall inhale and allow the plaister to be easily worked over it: it is afterwards to be rubbed over, and polished with a linen cloth greased with suet. This is said to answer very well upon walls, but I doubt much as to its permanence, when exposed to the perpetual friction of the sea. See Note on v. 327. of the present Book.

M. Le Roi, in his memoir above referred to, makes mention of ships with three masts constructed by Archimedes, at the instigation of Hiero; he gives a drawing of one of this description, copied from the antiquities of Herculaneum—and believes that ships with three masts were in use among the ancients, even prior to the time of the Syracusan mathematician. Of this I think there can be little doubt. Many of the vessels of the Greeks and Romans were of very considerable magnitude and burden; but the grand imperial galley constructed by Archimedes for his very excellent relation and king—the most magnificent we read of in ancient history, was built upon so stupendous a scale as to sink the largest modern ship of the line into a mere sloop or brig. This galley, according to Polybius, had twenty benches of oars, three spacious apartments, and all the conveniences of a magnificent palace. The floors of the middle apartment were exquisitely inlaid, and represented, in different colours, the stories of Homer's Iliad. The ceilings, windows, and every other part, were completed with admirable taste, and adorned with every possible embellishment. In the superior compartment was a spacious gymnasium, with walks and gardens richly stored with plants of all kinds disposed with wonderful precision. Pipes, occasionally of lead, and occasionally of hardened clay conveyed the refreshing stream they stood in need of. But the most magnificent of all the divisions, was that dedicated to Venus, as the goddess who sprang from the ocean: the floor of this was inlaid with agates and precious stones of equal beauty and value; its lining was of cypress wood, and its windows were ornamented with ivory, paintings, and statues. In this compartment was a library, and a warm bath: it was heated by three large coppers; and the bathing vessel was scooped out of an individual mass of marble of various colours, and contained two hundred and fifty quarts. It was supplied with water from a large reservoir at the head of the galley, which held not less than a hundred thousand quarts. The vessel was decorated on all sides with encaustic paintings, and had eight towers of equal dimensions, two at the head and stern, and four in the middle. These towers were constantly guarded by young men, of whom some were archers, and some in mail. To the side of the galley Archimedes placed an engine, which was capable of projecting stones of three hundred pounds weight the distance of a stadium, or an hundred and twenty-five feet. And it gives us a very explicit idea of the perfection of the ancients in the science of hydraulics, when we read that, although the hold of this floating palace was exceedingly deep, a single man was capable of clearing it of water in a short time, by a pump invented for the purpose. It was at length made a present of by Hiero to Ptolemy Philadelphus of Egypt. If the reader be desirous of tracing the ingenuity of the ancients in other departments, he may consult the Notes on v. 327. and 1046. of the present Book. It is very extraordinary, however, that although the Greeks and Romans were well acquainted with the magnet,—the history, and many of the pro-

This next the muse in melodies shall sing
More sweet than prolix; as the swan's lone dirge

perties of which are fully discussed by Lucretius in Book VI. v. 934. of the present Poem—they should never have been fortunate enough to have discovered its vast utility in the science of navigation—nor have acquired such a knowledge from the Oriental nations, among some of whom, and particularly the Chinese, it has been immemorially appropriated to this purpose.

Having thus cursorily glanced at a few of the mechanical powers of the ancients, which we seem to have lost, I will just notice, before I close this note, that we seem also to have lost the art of making several of the cements which, among the ancients, were applied to mechanical purposes, and were of immense use in all works of masonry—uniting the different bricks or stones of an edifice with such a pertinacity, that the substance of every brick or stone would break before the cement would relinquish its hold. Among the Babylonians, the more general cement employed appears to have been a composition of lime and liquid bitumen: but as the Romans were incapable of obtaining the latter, in any large quantity, without considerable trouble and expence, they were obliged to invent a substitute for it, and they found a very adequate one in oil. The peculiar mode, however, by which they combined their lime and oil, we are unacquainted with: but we know, from Vitruvius, that with these materials, and probably without the mixture of any other, they made the stucco and terrace mortar, with which they lined, externally, the sides and roofs of their houses, or united the stones or bricks with which they built them: and he recommends that to render the tenacity more perfect, the walls and roofs be moistened and saturated every Autumn with the lees of the olive, after its oil has been pressed out: "fracibus," says he, vii. 1. "quotannis ante hiemem saturetur." In 1777. M. de la Faye published, at Paris, a treatise upon this subject, which he entitled Recherches pour retrouver la Préparation donnée à la Chaux par les Romains; and we are told by M. Mongez, (Mem. de l'Instit. National Lit. et Beaux Arts, i.) that the architect who repaired the walls of the cathedral at Paris, in the ensuing year, profited by this treatise, and united his new materials to the old by a cement which, although its preparation was kept a profound secret, gave evident proofs of being a composition of lime and oil. It yet remains to be ascertained, however, whether the mode of its preparation were similar to that of the Romans, and whether it be possessed of an equal tenacity and durability. Probably, these important qualities might both be considerably augmented, if to the lime or calx were added a certain proportion of iron pyrite. Upon which subject, see the Note on Book VI. v. 1101. There are many other inventions of the Romans of vast utility in the same science of building, which we have equally lost, and of which a short account may be found in Pliny and Vitruvius.

Ver. 926. ——*soft sleep bedews the limbs,*] Thus Milton, employing the same metaphor:

——the timely *dew of sleep*
Now falling, with soft slumberous weight inclines
My eye-lids.

To the same effect, Valerius:

——alta quies, *liquidique* potentia somni.
Argon. iv. 16.

The heart-felt ease, the power of *liquid sleep.*

But the most bold and animated use of this metaphor of our poet, with which I am acquainted, is in the following verses comprising part of a very beautiful eclogue of Garcilazo de la Vega:

Y al que de pensamiento fatigado
El sueno baña con licor piadoso
Curando el corazon despedazado.

Whom sleep mid many an anxious scheme,
Bathes in his soft and soothing stream,
And o'er despair bids rapture beam.

The version of Marchetti is highly elegant, and strictly true to the original:

——il sonno per le membra *irrighi*
La stanca quiete.

Clamor, in ætheriis disparsus nubibus austri.
Tu mihi da tenueis aureis, animumque sagacem:
Ne fieri negites, quæ dicam, posse; retroque
Vera repulsanti discedas pectore dicta:
Tutemet in culpâ quom sis, neque cernere possis.

Principio, somnus fit, ubi est distracta per artus
Vis animæ; partimque foras ejecta recessit,

Ver. 909. ——*as the swan's lone dirge*
Flows forth superior to the clamorous croak] We have here another proof of our poet's attachment to what I have before denominated the periodic iteration. See Note on v. 1. of this Book. These two verses, with two more immediately attached to them, are repeated from Book IV. v. 185. They may, without transgression, be compared with the following meritorious, and truly musical verses of Beattie:

Though richest hues the peacock's plumes adorn,
Yet horror screams from his discordant throat.
Rise, sons of harmony! and hail the morn,
While warbling larks on russet pinions float.
Minstrel, i. 5.

Ver. 936. *Sleep, then, occurs when fades through every limb*
The soul's sensorial powers——] Our poet now proceeds to the philosophy of sleep, and it is impossible to peruse the theory he advances without recalling strongly to mind the system lately offered by Dr. Darwin. The connexion is truly astonishing: and although I dare not assert that the doctor derived his own immediately from the writings of Lucretius, yet if he did not, the connexion is more astonishing still. To dwell upon it would be nearly to repeat in prose, what the text gives us in poetry: and how closely this latter coincides with the opinion of Epicurus himself, may be collected from the following passage contained in one of his letters yet extant, as preserved by Diogenes Laertius: Ὑπνος το γινεται ποιουμενων των της ψυχης μερων, των κατ' ολην την συγχρισιν παρεσπαρμενων, η εγκατεχομενων, η διαφορουμενων, ητε και συμπιπτοντων τινων τοις εσπαρμενοις, τα μεν εξαθυιτων τα δε συνταραττοντων.

The different opinions of the other Grecian philosophers are scarcely worth recording: they are, upon the whole, equally puerile and unsatisfactory. Yet, perhaps, the moderns have not been much more successful. At the theory advanced by Dr. Darwin, I have already glanced: it betrays the source from which it was either directly or indirectly derived; yet, with all its additions, it is still unsatisfactory, and has little prospect of remote or extensive fame. Leibnitz, Wolfe, Locke, Berkley, and Beattie, are the chief physiologists, independently of Darwin, who have ventured to advance systems upon this delicate subject, in modern times: and of these, all are falling, or have nearly fallen already into the gulph of oblivion. That of Berkley is by far the most consistent, and best worthy of preservation: yet, the very rudiments on which it reposes, as I have previously had occasion to observe in Note on ver. 766. of the present Book, are in direct hostility with the best ascertained experiments of Galvanism, as directed to the human body; and even Berkley himself did not undertake to solve, upon this hypothesis, a variety of the phænomena that relate both to sleep and dreaming.

Such being the fact, I shall take the liberty of submitting to the reader's candid attention the following outlines of a theory of my own, drawn up

Flows forth superior to the clam'rous croak
Of countless cranes, by every wind disperst.
Hear thou attentive, and with mind acute,
Lest aught appear incongruous, and thy breast
Recoil abhorrent from the truths we teach,
Foe to the creed from ignorance alone.
Sleep, then, occurs when fades through every limb
The soul's sensorial power, part by fatigue

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for the purpose of compressing it into a single Note with as much conciseness as possible.

I. All the fibrils of the nervous system become fatigued, exhausted, and torpid, in proportion to the length and violence of their exertion, and recover their power alone by rest. The weariness and debility of the muscles of the arms or legs, after extreme exercise, or exercise to which they have not been accustomed, may be adduced as a sufficient proof of this position. The nervous fibrils of the external organs of sense are necessarily subject to the same effect: we neither hear, nor see, nor taste, nor feel, with the same accuracy, after any or all these various organs have been long upon the full stretch of action, with which we do on their first exertion in the morning. Increase, or prolongate their action, and their power will be still farther obtunded, till, at length, like an over-wearied limb, they become perfectly lethargic, and give no account of whatever is occurring around us; and it is this uniform lethargy, torpidity, or inaction of all the external senses, which we denominate SLEEP. By the exercise of the will, or any other strong stimulus, this sleep, or sensorial torpidity, may be postponed: and *vice versâ*, by the consent of the will, it may be expedited.

II. The vital organs are far less subject to the influence of stimulants of every kind, than the organs of external sense: their actions are hence far more equable and permanent; they are seldom wearied or exhausted, and, of course, seldom sleep or become torpid. From the application of very strong stimulants, however, whether external, as those of severe pain or labour, or internal, as those of disease, or excessive grief, such fatigue or exhaustion actually takes place; and when the exhaustion is complete, they also, like the organs of external sense, sleep, or become torpid:—in other words, death ensues, and the spirit separates from the body. The resemblance between *death* and *sleep*, therefore, is not less correct, upon the principles of physiology, than it is beautiful among the images of poetry. *Sleep* is the *death* or *torpidity* of the organs of external sense, while the vital functions continue their accustomed actions: *death* is the *sleep* or torpidity of the whole.

III. Every organ of the animal frame recovers from its fatigue or torpidity by rest, provided the principle of life, that is to say, the action of the vital organs, continues. Hence, the organs of external sense, in a definite period of time, and a period generally proportioned to the degree of their exhaustion, re-acquire their accustomed vigour, are *alive* to the influence of their appropriate stimulants, and the smallest excitement applied to any one of them, throws the whole once more into action: in other words, the man awakes from *sleep*, he rouses himself from the temporary *death* of the organs of external sense. Were it possible for life to continue during a total rest or torpidity of the vital organs, as it does during that of the organs of external sense, there is no doubt that these also would, in time, re-

Et partim contrusa magis concessit in altum :
Dissolvuntur enim tum demum membra, fluuntque.

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cover from their exhaustion, and that the man would, in like manner, awake from the total torpidity, the sleep or death of the entire frame: but this is impossible; the soul has now deserted the body: a change in every organ ensues, and the whole system, instead of reviving, becomes a prey to corruption and ruin.

IV. When the organs of external sense have recruited themselves by repose, the stimulus that rouses the one, rouses, at the same time, the rest, from a habit of association. From the same habit, the torpidity produced by exhaustion, in any single organ, is propagated through every other, and the sleep becomes common to the whole: although it is also unquestionable, that the whole are also fatigued, or partially exhausted, from the fact, that the general stock of sensorial power has been borrowed, in a considerable degree, from the rest, and expended at a single outlet.

V. The nervous fibrils, or rather, tubules of the external organs of sense, are equally affected, and, of course, become equally exhausted, whether the stimulus be applied at either end, to wit, the end terminating externally, or that connected with the brain; and hence, internal excitements, as those of severe study, intense grief, undue eating and drinking, or febrile diseases, produce the same effect as causes operating from without.

VI. In either case, the sleep or torpidity produced is sound or healthy, under a certain degree of exhaustion alone: hence mankind sleep most refreshingly after moderate or accustomed fatigue, moderate or accustomed study, moderate or accustomed meals.

VII. If the stimulus be a little increased beyond this medium, the vital organs themselves become affected, an undue and morbid proportion of sensorial power is secreted, which postpones the torpidity or sleep for the present, but at the expence of the general strength of the whole system; which, in consequence, becomes gradually more exhausted and debilitated: whence a far deeper torpidity, or sleep, must necessarily ensue at length, than would have occurred in the first instance. If such torpidity take place before the vital organs are totally exhausted, it is confined to the external organs of sense alone, which hereby progressively recover their accustomed activity and vigour: if the vital organs be themselves altogether exhausted, before the torpidity ensues, it is propagated to themselves, and the consequent sleep is the sleep of death. Violent and long-continued labour, as an external stimulus, violent and long-continued study, violent and continued fevers, violent and continued grief, a very inordinate debauch, as internal stimuli, are equally liable to produce the effects here specified: and the one or the other will take place in proportion to their excess and extremity.

VIII. If the stimulus affecting the external organs of sense, at which end soever it be applied, be intolerably pungent or forcible, the sensorial power is exhausted immediately, and the organ directly affected becomes instantly torpid. Hence sounds, insufferably loud, make us deaf; excessive light makes us blind; acrimonious smells, or savours, render us incapable of smelling or tasting: and hence, an abrupt shock of joy or grief, a sudden and intense paroxysm of fever, large quantities of wine or spirits, as internal causes, produce coma, palsy, apoplexy, which are only so many modifications of the sleep or torpidity of the nervous tubules of the external organs of sense. If the same abrupt and violent cause be sufficiently powerful to act upon the vital organs as well as those of external sensation, the torpidity becomes universal, and the sleep induced is, once more, the sleep of death.

IX. As violent stimulants produce sudden and irrecoverable torpidity, either general or local, according to the mode and place of application, stimulants less violent, induce a tendency to the same effect.

Wasted through ether, and concenter'd part
Deep in each vital organ; till, at length,
Lax grow the members, listless, and dissolv'd. 940

Hence the nostrils, not accustomed to snuff, are more forcibly agitated by its application than those that are so; the eyes of persons accustomed to sleep in the glare of the sun, find no inconvenience from exposure to the light of the morning; while those who always sleep in total darkness, are awoke by the return of day-light. And so of the rest.

X. On this account, a very small portion of light, of sound, or of exercise, even the breath of the air alone, are each of them powerful stimulants upon infants, because unaccustomed to them: hence they sleep much, and soundly: so soundly, indeed, that no common stimulus is able, for a long time, to arouse them from their torpidity. In other words, it requires a period of many hours for the external organs to recover from their exhaustion. The smallest undulatory motion in the uterus, and the very action of the vital organs themselves are, perhaps, sufficient to wear out, from time to time, the sensorial power of the fetus on its first formation: and hence, the fetus sleeps, with few intermissions, through the whole period of parturition.

XI. For the same reason, persons in an advanced age are far less impressed by common stimulants than in any former period of their lives: from a long series of exposure to their operation, their organs are become more torpid, and hence they require less sleep, and, at the same time, less food. The vital organs, as well as those of external sense, partake of the same disposition. They are, in consequence, less liable to all violent or inflammatory disorders: but the general torpidity increasing, the heart is stimulated with great difficulty—a smaller portion of sensorial power is secreted from the gasses of the atmosphere—a smaller portion of food is thrown into the system from the stomach—the pulse, and every other power, gradually declines, till, at length, if ever man were to die of old age alone, he would die from a total torpidity or paralysis of the heart. But debilitated or torpified as every organ is become, long before such a period can arrive, the frame at large is incapable of resisting the smallest of those trivial shocks to which man is daily exposed, either internal or external; or, in other words, there is no accumulation of sensorial power to supply the temporary demand, and the man dies from sudden exhaustion rather than from progressive paralysis.

Upon this theory I might easily and obviously solve a variety of problems which have hitherto eluded all satisfactory explanation: but, as I intend to pursue the subject more fully, in a short time, and to present it before the public in a different and a detached form, I shall only add to this outline of the theory of SLEEP, a few observations upon that of DREAMING, which is so intimately connected with it, as well in nature as in the Poem before us.

I. A certain but a very small degree of stimulus applied, perhaps, to any nerve whatever of the human body, instead of exhausting it, seems to afford it pleasure: or, at least, the nerve is able to endure it without becoming torpid, or, which is the same thing, requiring sleep or rest. The orbicular motion of the lips to an infant accustomed to suck, is a source of so much comfort, and attended with so little exhaustion, that, whether sleeping or waking, it will generally be found mimicking the act of sucking, when at a distance from its nurse, and perhaps not thinking of such action itself. A person who, from habit, has acquired a particular motion of any one of his limbs, a twirl of the fingers, or a swinging of one leg over the other, perseveres in such motion from habit alone, and feels no torpidity or exhaustion in the nerves that are excited, although it might be intolerably fatiguing to another who has never acquired the same custom.

II. It is probable, that both thought, and the action of the vital organs, are stimulants of this precise character, if not in their commencement, at least, very shortly afterwards: that nearly, if not altogether, from the first, they are equally pleasing

Nam dubium non est, animaï quin operâ sit
Sensus hic in nobis; quem quom sopor inpedit esse,
Tum nobis animam perturbatam esse putandum est,
Ejectamque foras: non omnem; namque jaceret
Æterno corpus perfusum frigore leti,
Quippe ubi nulla latens animaï pars remaneret

and gentle in their degree of action; and that hence they equally, also, continue without exhausting us, except when unduly roused; and form a habit too pertinacious and invincible to be broken through by any exertions whatever.

Thought is, then, to the brain that which the muscular habits, I have just spoken of, are to the muscles which are the subjects of them. Both continue alike, whether we be reflecting upon the action, or whether we be not: but the habit of thinking is so much older, and consequently, so much deeper rooted than that of any kind of gesticulation, that, as I have just observed, it is impossible for us to break through it by the utmost efforts of the will: whence it accompanies us, excepting when the brain is totally exhausted, and, consequently, thrown into a profound torpidity or sleep, not only at all times when awake, but almost at all times during sleep, and is the immediate and necessary cause of our DREAMING.

III. Thought can only be exercised upon objects introduced into the brain, or general sensorium, by the organs of external sensation: and hence the bent or chief direction of our thoughts, whether sleeping or waking, must be derived from those objects which principally impress us, be the causes of such impression what they may. The train of thoughts, then, which recurs from habit alone, as in sleep, or total retirement from the world, must generally be of this description; in the former case, however, by no means correctly or perfectly, because there are others, also, which have a tendency to recur, and neither the will nor the senses are in action to repress them: whence proceeds a combination of thoughts or ideas, sometimes in a small degree incongruous, and, at other times, most wild and heterogeneous; occasionally, indeed, so fearful and extravagant as to stimulate the senses themselves into a sudden renewal of their functions, and consequently, to break off abruptly the sleep into which they were thrown.

IV. If the action of the nervous tubules of the brain, thus continued from habit, and producing our dreams, be less powerful during sleep than is sufficient to rouse the senses *generally*, it may, nevertheless, at times, be powerful enough to excite, into their accustomed exercise, the muscles of those organs or members which are more immediately connected with the train of our dreams, or incoherent thoughts, while, nevertheless, every other organ or member still remains torpid. Hence some persons talk, and others walk in their sleep, without being apprized, on their waking, of any such occurrence.

V. Whatever be the set of nerves that have chiefly become exhausted from the labour or stimulus of the day, the rest, as I have already noticed, partake of the same torpidity from long habit of association; exhausted, in some degree, also, themselves, by the portion of sensorial power which, as from a common stock, they have contributed towards the support of the debilitated organ. But it sometimes happens, either from disease, or peculiarity of constitution, that all the external organs of sense do not associate in their actions, or yield alike to the general torpidity of the frame: and that the auditory, the optical, or some other set of nerves are in vigour, while all the other nerves of the external senses remain torpid: as it may do also, that an entire organ of external sense, like the muscles of an individual

For pow'r sensorial doubtless from the soul
Derives; and hence, when sleep the senses locks,
Th' enfeebled soul itself to reason seems
Worn out, and all ejected into air.
Yet not entire: for then this mortal make
Must sink subdu'd in death's eternal ice,

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member, as observed in the last paragraph, may be awoke or re-stimulated into action by the peculiar force and bent of the dream, while all the rest continue lethargic.

VI. If the organ of external sense, thus affected, be that of *hearing*, a phænomenon will occur, which is specifically noticed by our poet in Book V. v. 1182. but which, I believe, has never hitherto been satisfactorily explained: the dreamer must necessarily hear a bye stander who speaks to him;—and if, from the cause specified above, he should happen to have talked in his sleep, so as to give the bye-stander some clue into the train of thoughts of which his dream is composed, a conversation may be maintained, and the bye-stander, by dexterous management, and the assumption of a character which he finds introduced into the dream, be able to draw from the dreamer the profoundest secrets of his bosom: the other senses of the latter, instead of rousing hereby, to detect the imposition, being plunged into a still deeper lethargy, from the demand of an increased quantity of sensorial power to support the exhaustion which the wakeful or active organ is, in consequence, sustaining.

VII. If the wakeful nerves be the *optical* alone, the somnambulist, or dreamer who is accustomed to walk in his sleep, will be able to make his way towards any place to which the course of his dream directs him, with the most perfect ease, and without the smallest degree of danger. He will see as clearly, and perhaps, more so, as if generally awake: yet, from the very exhaustion, and, of course, increased torpidity of the other organs, in consequence of an increased demand of sensorial power from the common stock, to support the action of the sense and muscles immediately engaged, every other sense must necessarily be thrown into a deeper sleep or torpidity than on any other occasion. Hence the ears will not be roused even by a sound that might otherwise awake him; he will be insensible, not only to a simple touch, but a severe shaking of his limbs, and may even cough violently without being recalled from his dream. Having accomplished the object of his pursuit, he may safely return, even over the most dangerous precipices, for he sees them distinctly, to his bed; and the optical nerves themselves, being now quite exhausted, and the system at large incapable of affording any addition of sensorial power, the torpidity must necessarily be rendered general and profound—so profound, perhaps, as to destroy the habitual action of the nervous tubules of the brain itself, and produce sleep without thought or dreaming.

VIII. This phænomenon of somnambulism has never, that I know of, to the present day, been satisfactorily, or even plausibly accounted for. It follows necessarily, in conjunction with that of speaking and conversing in sleep, from the theory of which I have now, for the first time, presented the outlines; and, I trust, will appear plain and intelligible to the reader.

It must be obvious, that the theory before us is closely connected with a variety of other very important phænomena, which the actions of the human frame occasionally disclose: with the incubus, or night-mare; with winter-sleep; aberrations of the mind in fevers, madness, idiotism; and, in few words, with every deviation from health to which the system is liable. That meaning, as I have already observed, to pursue the subject in a separate inquiry, as a branch of a new and entire system of Physiology, I shall add nothing farther upon it at present.

In membris, cinere ut multâ latet obrutus ignis;
Unde reconflari sensus per membra repente
Possit, et ex igni cæco consurgere flamma.
Sed, quibus hæc rebus novitas conflatur; et, unde
Perturbari anima, et corpus languescere, possit;
Expediam: tu fac, ne ventis verba profundam.
Principio, externâ corpus de parte necessum est,
Aëriis quoniam vicinum tangitur auris,
Tundier, atque ejus crebro pulsarier ictu:
Proptereaque, fere res omnes aut corio sunt,
Aut etiam conchis, aut callo, aut cortice, tectæ.
Interiorem etiam partem spirantibus aër
Verberat hicc' idem, quom ducitur, atque reflatur.
Quâ re utrimque secus quom corpus vapulet, et quom
Perveniant plagæ per parva foramina nobis
Corporis ad primas parteis, elementaque prima;
Fit quasi paullatim nobis per membra ruina:
Conturbantur enim posituræ principiorum
Corporis atque animi; sic, ut pars inde animaï
Eliciatur, et introrsum pars abdita cedat;
Pars etiam, distracta per artus, non queat esse
Conjuncta inter se, neque motu mutua fungi:

Ver. 956. ——*the tender frame*
With skin surrounds, hair, bark, or painted shell's.]

In the original, ver. 933:

——fere res omnes aut corio sunt,
Aut etiam conchis, aut callo, aut cortice, tectæ.

Besides these external coverings, which are all that are specified by our poet, Marchetti, in his ver-

No latent atom left, as sparks that lurk
In smother'd embers, whence its powers afresh
Might blaze, triumphant, with recover'd flame.
Yet by what means this wond'rous change results,
Whence fails the soul, and all the body droops,
Now mark, nor let the dictates waste in air.
Know then all ether, that around us flows,
Beats on the body, open to its force,
With ceaseless repercussion. Nature hence,
To check its fury, oft the tender frame
With skin surrounds, hair, bark, or painted shells.
Nor ceases here th' assault; the breeze inhal'd
Winds, too, through all the system, and each duct
Lashes amain with every fleeting breath.
Since with a two-fold foe, then, nature, thus,
Through all her depths, through all her pores minute,
Strives ceaseless, ruin by degrees must threat:
For each primordial seed is deep derang'd
Of mind and body; while th' enfeebl'd soul,
By transudation shorn, concentrates part
In the deep vitals, and in part still roams
Through all the limbs distracted, seed from seed

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sion of this passage, has enumerated a great variety more:

E per questa cagion tutte le cose
Son coperte da collo, e da corteccia,
O da cuojo, o da setole, o da velli,
O da spine, o da guscio, o da conchiglie,
O peli, o piume, o lana, o pene, o squame.

Inter enim sæpit cœtus natura, viasque;
Ergo sensus abit, mutatis motibus, alte.
Et, quoniam non est, quasi quod subfulciat artus,
Debile fit corpus, languescuntque omnia membra;
Brachia, palpebræque, cadunt; poplitesque cubanti
Sæpe tamâ submittuntur, viresque resolvunt.
Deinde, cibum sequitur somnus, quia, quæ facit aër,
Hæc eadem cibus, in venas dum diditur omneis,
Ecficit: et multo sopor ille gravissumus exstat,
Quem satur, aut lassus, capias; quia plurima tum se
Corpora conturbant, magno contusa labore.
Fit ratione eâdem conjectus parte animaï
Altior, atque foras ejectus largior ejus;
Et divisior inter se, ac distractior, intus.

Et, quo quisque fere studio defunctus adhæret;
Aut quibus in rebus multum sumus ante moratei,

Ver. 984. *Thus slumber issues; and whate'er the thoughts*] He proceeds to the phænomena of dreams, which are accounted for upon the common principle of universal effluvia, and the power of these volatile and tenuous pellicles to pervade the pores of the corporeal frame, and impinge upon the mind itself, without the intervention of the organs of sense. See Note on ver. 41. of this Book.

The doctrine of Aristotle, who, conjointly with Epicurus, admitted of the existence of phantoms or emanations, is not very dissimilar: for dreams, he expressly tells us, are only those phantasms, emanations, or apparitions of things arising from impressions produced by external objects on the brain, and remaining after such objects are removed. Not widely different from which was the doctrine of Hobbs and of Wolfe: the latter of whom asserts, that all dreams originate from external impression upon the organs of sense, and are continued by a succession of phantasms in the mind; but that no phantasm, and of course no dream, can possibly take place, without some such previous sensation. Psychol. Empir. sect. 123.

If, for phantasms, we read ideas, we have the conjoint theory of Malbranche, Des Cartes, and Locke.

The ingenious hypothesis of Hartley, some account of which, as well as of the radical objections

Sever'd, to join all powerless, or resume
Their wonted action; hence each varying sense,
The fount sensorial failing, must itself
Fail too abrupt, the total body droop,
The limbs grow languid, listless hang the hands,
Totter the knees, and the faint eye-lids fall.
Thus food, alike, when through the frame it pours
Its stream salubrious, since the toiling air
It mocks in action, slumber too excites.
And heavier far his sleep whom diet full,
Or long fatigue o'erpow'rs, for ampler, then,
Th' intestine labour, and the soul flies off
Ampler external; while the remnant shrinks
Profounder part, and part through every limb
Strays more distracted, of all bond devoid.
Thus slumber issues; and whate'er the thoughts
That chief subdue us, the concerns that claim

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which at present attach to it, has been just communicated in Note on v. 766 of this Book, admits of a plausible solution of this phænomenon. The uninterrupted chain of vibrations and vibratiuncles, which necessarily extends through the whole period of life, as it is the source of all sensation and imagination, must also be the source of dreams: and the different associations of these vibrations and vibratiuncles determine the nature and subject of such dreams. Obs. on Man, i. sect. 5. For the translator's own theory, see Note on ver. 936. of the present Book.

Ver. 984. ——*whate'er the thoughts*
That chief subdue us, the concerns that claim]

In the Acripanta, an old and neglected Italian tragedy, noticed by Mr. Walker, in his "Historical Memoirs," we meet with a passage that quadrates so precisely with the whole of these observations of Lucretius, as to have very much indeed the appearance of a copy:

Che puo trovarsi piu fugace o lieve,
O fallace ch' il sogno! Udito ho dire
Da i saggi tuoi, che quai gli humori sono
Entro soverchi al nostro corpo, tale
E' il sogno, ancor che da lor nasce e viene:
Nascere ancora le piu fiate suole
Dal fumo, che nel sonno il cibo manda

Atque in eâ ratione fuit contenta magis mens;
In somnis eadem plerumque videmur obire:
Caussidicei caussas agere, et conponere leges;
Induperatores pugnare, ac prælia obire;
Nautæ contractum cum ventis degere bellum;
Nos agere hocc' autem, et naturam quærere rerum
Semper, et inventam patriis exponere chartis.
Cætera sic studia, atque artes, plerumque videntur
In somnis animos hominum frustrata tenere:
Et queiquomque, dies multos, ex ordine ludis
Adsiduas dederint operas, plerumque videmus,
Quom jam destiterunt ea sensibus usurpare,
Reliqüas tamen esse vias in mente patenteis,
Quâ possint eadem rebus simulacra venire.
Per multos itaque illa dies eadem obvorsantur
Ante oculos, etiam vigilantes ut videantur
Cernere saltanteis, et mollia membra moventeis;

A l'intelletto, e se'l vapor, ch' essala,
Fosco, o torbido sia, torbi e foschi
Pensieri forma, e timor varij adduce:
E qual pensiero, che continuo, e spesso
Agita l'huomo con la mente il die,
Ritornar suol sovente in sogno: e quindi
Segue la fiera il cacciator dormendo,
Il soldato nel sonno altrui ferisce,
Gode sognando l' amadore la diva.
Act I. Scen. IV.

What more illusive can we find than dreams?
More fugitive or airy? I have heard
From thy own sages, that the humours gross,
With which at times the body overflows,
Forms, and decides them: but that, ofter still,
From fumes upspring they, that our food, in sleep,
Send to the brain; and that as dense and dark
Th' excreted vapour, dense and dark alike
The thoughts produc'd, with terror amply fraught:
While the fond scenes that daily sway the man,
And fill the spirit, haunt him still in sleep.
Whence dreams the huntsman, punctual, of the chace;
The warrior pants for combat; and the youth,
Fever'd with love, o'erhangs th' assenting fair.

The analogy that so closely exists between the text, the present passage of the Acripanta, and

Our ceaseless care, or what the mind explores
With patient pause, in dreams we still pursue.
The lawyer, thus, o'er briefs, and statutes pores;
New wars the soldier wages; with the winds
Strives the vain mariner; while we the laws
Of nature scan perpetual, and how best,
When trac'd, to paint them in our native tongue.
So various lores beside, and arts diverse
Haunt, oft, in sleep the cheated mind of man.
He who from eve to eve, assiduous, long
Has mark'd the public stage, though now no more
It strike his senses, through his porous frame
Still the light images admits that float
Countless around him. Hence, for many a day,
E'en while awake, the scene before his eyes
Seems still renew'd; the light-deckt dancers move
Their modulated limbs, the living lyre

Shakspear's description of the dreams excited by the fairy Queen Mab, ought not to pass unnoticed:

And in this state she gallops, night by night,
Through lovers' brains, and then they dream of love;
On courtiers' knees, that dream of curtsies strait:
O'er lawyers' fingers, who strait dream of fees.—
Sometimes she driveth o'er a soldier's neck,
And then he dreams of cutting foreign throats.
Rom. and Jul. I. iii.

Ver. 992. *How best to paint them in our native tongue.*] The present, and preceding verse, are thus expressed in the original, ver. 967:

Nos agere hoc' autem, et naturam quærere rerum
Semper, et inventam patriis exponere chartis.

It is worth while to amuse ourselves with Des Coutures' very *concise* translation of this couplet: "Et nous-mêmes ne croyons nous pas philosopher, et faire des recherches pour penetrer la nature? de maniere qu'il nous semble qu'ayant reüssi dans nos speculations, nous faisons part de nos decouvertes, par le secours de la langue naturelle, et par l'invention si utile du papier qui reçoit nos pensées."

L 2

Et citharæ liquidum carmen, chordasque loquenteis,
Auribus adcipere; et consessum cernere eumdem,
Scenaïque simul varios splendere decores.
Usque adeo magni refert studium, atque voluntas;
Et, quibus in rebus consuerint esse operatei
Non homines solum, sed vero animalia cuncta.

Ver. 1006. *Of such vast import are the plans pursu'd,*
The thoughts indulg'd,——] So generally does the imagination follow the common train of our habitual views and passions in sleep, that Smellie, in his Philosophy of Natural History, gravely advises us to study the important science of self-knowledge from a regular history of our dreams, committed to writing every morning as soon as we awake; and has given us a prospectus of this kind of nocturnal table with regard to his own slumbers, for four or five days. "This method," says he, "of discovering our real characters, it may be alleged, is more uncertain, and attended with greater difficulty than self-examination. But we should reflect that, during sleep, the mind is more ingenuous, less inclined to palliate its real motions, less influenced by public opinion, and in general more open and candid than when the senses are awake." Philosophy of Natural History, vol. ii. 3.

This, with respect to all persons who *dream* in their sleep, is highly probable; but more especially with respect to somnambulists, or others who are subject to an occasional wakefulness of one or two organs, while the rest are plunged into a profound torpidity. I have already observed, in the Note on v. 936. of the present Book, that where the vigilant sense is that of *hearing* alone, the sleeper will often, without any consciousness of the fact, enter into conversation with any one who may address him: his ears are open to the voice, but he cannot discriminate the person, and in almost every instance mistakes him. Completely thrown off his guard, he generally unbosoms all his heart, and discloses to a dexterous addresser the most important secrets in which he has been engaged. See the French Encyclopedei, Nottambule.

Animals, that sleep throughout the whole of the winter-season, have certainly a less vivid imagination during their torpidity, and probably have no imagination or dream at all. In general, there is scarcely any action of any kind, either of soul or body, perceptible to the minutest scrutiny. Dormice and squirrels are as fat when they awake in the spring as when they become torpid in the autumn; but they lose neither perspiration nor excrement. Yet bats are known to part with the latter, during their winter-sleep; and the hedge-hog and the Alpine marmot, however fat when they first enter their subterranean retreats, become extremely emaciated on recovering from their torpidity.

In general, these hybernal slumbers, whether of birds, reptiles, or insects, are produced by an augmented coldness in the atmosphere upon animals whose natural temperature seldom, when awake, exceeds five or six degrees of the freezing point, and is almost always, therefore, excepting in winter, considerably below the temperature of the atmosphere itself. The garden squirrel, the fat squirrel, sciurus glis of Linnéus, the dormouse and the bat, do not much vary in the internal heat of their bodies at any time; it seldom exceeds 37 or 38 degrees of Farenheit, which last number is but six degrees above the freezing point, even when the atmosphere is heated to 70: and it generally sinks to about 34 in their state of torpidity. When the coldness of the atmosphere surpasses that of their own bodies, or in some cases only equals it, they become torpid, seek some secluded asylum, and voluntarily resign themselves

He hears entranc'd, from every fluent string
Speaking empassion'd; he the throng surveys,
And all the pageantry the drama boasts.
Of such vast import are the plans pursu'd,
The thoughts indulg'd, the customs deep impress'd
Of man not merely, but of brutes as well.

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to sleep. If this coldness be prevented, by removing them to a greater degree of artificial heat, they will all pass through the winter without more sleep than in the summer time. If, during their torpidity, the cold be increased to a very intense degree, the vital functions, which in a smaller proportion of cold always exhibit a diminished action, will then be totally destroyed, and the animal die of course. And if, on attempting to recover it from its slumber, we suddenly employ an intemperate proportion of heat, it will die as readily as from an undue degree of cold. Experiments upon the swallow, cuckoo, and common fly, have abundantly confirmed the truth of these observations; and at the same time proved, that the exhaustion of the mechanical parts of the system, during sleep, is so small as to require little or no assistance from foods of any kind.

Perhaps all animals, under certain circumstances, would exhibit the same phænomenon; at least, there are various facts which indicate that it is not foreign to the nature of man himself. Towards the termination of a long typhous fever, when life has for several days been alone supported by the almost incessant administration of wine, or other cordials, sleep will sometimes supervene, and continue without interruption for the space of twelve, or even four and twenty hours; and the patient, on awaking, instead of fainting away, in consequence of his long abstinence, will feel far more refreshed and invigorated than before he fell into his slumber. During profound sleep, therefore, to whatever term it be protracted, little or no nutriment appears to be requisite. The torpifying power of cold is well known: even in our own country, but especially in latitudes that are still more frigid, we often hear of many a poor wretch who falls a sacrifice to it during the intensity of winter. Now, in all such cases, the symptom that immediately precedes a total cessation of life, is an unconquerable inclination to sleep. If this sleep be indulged, where the cold is extremely severe, death must be the inevitable consequence: but if the common frigidity of the atmosphere be less, or any accidental circumstance occur to diminish its intensity, should it be very violent, the sleep induced, like that of animals accustomed to hybernal torpidity, may not be fatal, and the very slumber into which the sufferer is thrown will enable him to survive for weeks, or perhaps months, without the assistance of sustenance of any kind.

These observations will tend to explain two well attested, but extraordinary histories which have lately been published to the world of persons actually placed in such a situation, and with a similar result. The one is of a farmer's wife near Cambridge, who lost her road in returning from market in the winter-time, and was dug out alive, after having been buried under large drifts of snow, and without any nutriment, for eleven or twelve days: and the other, of a woman near Lichfield, who continued in a similar situation, and with as little injury, for fifteen days. In both these cases, the covering of the snow defended the unfortunate sufferers from such a degree of frost as must otherwise have proved fatal; but the cold they endured was still sufficient to torpify them, or compel them into sleep: and this very sleep prevented the necessity of their accustomed meals, and enabled them to endure the privation without a total exhaustion of vital power.

Quippe videbis equos forteis, quom membra jacebunt
In somnis, sudare tamen, spirareque, semper;
Et quasi de palmâ summas contendere vireis.
[Aut quasi carceribus patefactis sæpe quiete.]
Venantumque canes in molli sæpe quiete
Lactant crura tamen subito, vocesque repente
Mittunt, et crebro reducunt naribus auras,
Ut vestigia si teneant inventa ferarum;
Expergefacteique sequuntur inania sæpe
Cervorum simulacra, fugæ quasi dedita cernant;
Donec discussis redeant erroribus ad se.
At, consueta domu, catulorum blanda propago
Discutere et corpus de terrâ conripere instant;
Proinde, quasi ignotas facies atque ora tuantur.
Et, quo quæque magis sunt aspera seminiorum,
Tam magis in somnis eadem sævire necessum est.

At variæ fugiunt volucres, pinnisque repente

Ver. 1016. *E'en while awake, with vigour he pursues*
Vain semblances of deer,——] To be sensible, in our waking hours, of the vague and single images of things thrown through the atmosphere from a considerable distance, and striking too imperfectly upon the eye to be noticed in the midst of images that assault it from objects placed in our immediate vicinity, requires great abstraction of mind, even upon the Epicurean theory. This, however, upon the theory before us, must occasionally occur; and necessarily lays a foundation, as I have already noticed in the comment on ver. 41. of this Book, for a belief in ghosts, and preternatural communications. In the verse now before us, the poet is asserting that this curious phænomenon is not confined to the race of man, but extends at times even to the brute creation, who are deceived precisely in the same manner, not in their dreams alone, but occasionally when awake, and relaxed in their musings.

Ver. 1020. *E'en the soft lap-dog*——] In the original, ver. 995:

——catulorum *blanda propago.*

For the nerv'd steed, as o'er the glebe he lies,
Oft sweats, and pants laborious in his sleep,
As though amain contending for the palm.

So, too, the hound, amid his soft repose,
Oft starts abrupt, and howls, and snuffs the breeze
With ceaseless nostrils, as though full at hand
He track'd the antler'd trembler. And, at times,
E'en while awake, with vigour he pursues
Vain semblances of deer, as though themselves
Started before him, till the phantoms void
Vanish at length, and truth regain her sway.
E'en the soft lap-dog his inglorious sleep
Breaks not unfrequent, rousing all erect,
Urg'd by the semblance of some face unknown.
And as of harsher seeds the trains are form'd
Of floating phantoms, with augmented force
Strike they the mind. Hence birds, with flight abrupt,

Marchetti has strangely erred in giving to his version of this passage the double appellation of "house-dog and shepherd's dog." "They often," says he, "start, as if they surveyed the hateful presence of the rapacious wolf, or the unknown face of a midnight thief." In the original, we meet with neither *house-dog* nor *shepherd's-dog*, nor *wolf*, nor *thief*, nor any thing that has the remotest reference to any such terms:

Ma le rezze solicite de' cani
Delle mandre custodi, e degli alberghi,
Quasi abbian visto di rapace lupo
L'odiata presenza, o di notturno
Ladro il sembiante sconosciuto.

It is curious, however, to observe, that Thomson, in imitating this passage, seems to have given it a similar interpretation:

The *house-dog*, with the vacant *grey-hound*, lies
Outstretch'd and sleepy. In his slumbers one
Attacks the *nightly thief*, and one *exults*
O'er hill and dale; till, waken'd by the wasp,
They, starting, snap. Seasons, ii. 232.

Solicitant divôm nocturno tempore lucos,
Adcipitres somno in leni si prælia pugnasque
Edere sunt, persectantes, visæque volantes.

Porro, hominum mentes, magnis quæ motibus edunt,
Magna itidem sæpe in somnis faciuntque, geruntque.
Reges expugnant, capiuntur, prælia miscent;
Tollunt clamorem, quasi si jugulentur ibeidem.
Multei depugnant, gemitusque doloribus edunt;
Et, quasi pantheræ morsu, sævive leonis,
Mandantur, magnis clamoribus omnia conplent.
Multei de magnis per somnum rebus loquuntur:
Indicioque sui facti peræpe fuere.
Multei mortem obeunt: multei, de montibus altis
Ut quei præcipitent ad terram, corpore toto
Exterruntur; et ex somno, quasi mentibus captei,
Vix ad se redeunt, permotei corporis æstu.
Flumen item, sitiens, aut funtem propter amœnum
Adsidet, et totum prope faucibus obcupat amnem.

Ver. 1030. *Then what vast toils engage men when asleep!*] I here copy, from the English commentator upon Creech, the following verses from Petronius, which are adduced as containing a happy analogy with this passage in Lucretius:

Somnia quæ mentes ludunt, volitantibus umbris;
Non delubra deûm, nec ab æthere numina mittunt,
Sed sibi quisque facit. Nam quum prostrata sopore
Urget membra quies, et mens sine pondere ludit,
Quicquid luce fuit, tenebris agit: oppida bello
Qui quatit, et flammis miserandas sævit in urbes,
Tela videt, versasque acies, et funera regum,
Atque exundantes perfuso sanguine campos.

The reader may accept of the following version:

The dreams that cheat us through the midnight gloom,
Not from the gods, or powers ethereal come:

Oft to the centre of the sacred groves
At midnight hurry, in their dreams disturb'd
By hideous sight of hawks, on outstretch'd wing,
Prowling aloft all active for the pounce.
Then what vast toils engage men when asleep!
How pants the mind beneath superb exploits!
Kings strive with kings in combat; or at large
Contend, surrender, pour the cries of death;
While some fight on, though wounded, loading still
All heaven with groans, as though to atoms torn
By some huge lion, or remorseless pard.
Some, too, aloud their machinations tell,
And thus in sleep full oft themselves accuse.
Some on their death-bed seem; and some to leap
Headlong from precipices; by the fright
Awoke, of reason so bereft, the mind
Scarce with the day resumes its wonted reign.
While, oft, the dreamer, all athirst, o'erhangs
Some joyous stream, and drinks the total tide.

Ourselves create them. For, at ease reclin'd,
When sleep o'ersways, and sports th' unanxious mind,
Whate'er the day creates, the dark renews.
Hence he, whose sword distress and havock strews,
Sees towns in flames, contending princes fall,
Fields drench'd with blood, and death the world appall.

In like manner, Juvenal, addressing himself to Justice personified:

Te videt in somnis. Tua sacra et major imago
Humanâ turbat pavidum, cogitque fateri.
Sat. xiii. 221.

Thee sees he in his sleep—thy awful *shade*
In more than human majesty array'd,
Frowns on the wretch, alarms his treacherous rest,
And wrings the dreadful secret from his breast.
Gifford.

Ver. 1037. *Some, too, aloud their machinations tell,*]

Purei sæpe, lacum propter, seu dolia curta, 1020
Somno devinctei, credunt se extollere vestem:

Ver. 1046. *The public sewer,*——] In the original, ver. 1020:

Purei sæpe, *lacum* propter—

The poet undoubtedly refers to the urinary reservoirs erected in the streets at Rome, either for the purpose of public cleanliness, or for the use of the fullers who were accustomed to purchase their contents of the Roman government, during the reign of Vespasian, and perhaps of other emperors, at a certain annual impost; and which, prior to the invention, or general use of soap, was the substance principally employed in their mills for cleansing stuffs and cloths previous to their being dyed. The same excretion from other animals was carefully preserved and sold to them for the same purpose. Thus Pliny, xxviii. 8. Cameli—urinam fullonibus utilissimam esse tradunt. M. Ameilhon, in his first Memoir on the Colours of the Ancients, and the arts which are connected with them, (Memoires de l'Instit. Nat. Lit. et Beaux-Arts, tom. I.) has given a full and correct account of the handicraft of the Greek and Roman fuller: from which, as offering a surprising resemblance to the same trade and the manufactures connected with it, as conducted in modern times,—and as I do not know that a more proper place than the present will occur,—I shall take the liberty of selecting various observations; at the same time adding a few remarks of my own, in confirmation of their general purport.

Independently of the excretion just referred to, M. Ameilhon has also proved that, in scouring the wool from its grosser impurities, and the greasy matter with which it is at first impregnated,—a matter which by the Greeks was denominated οισυπον, and by the Romans *sevum*, the fullers of ancient times employed also a lye, that in Aristotle's Treatise on Colours, or the book of this name attributed to him, is called κονια, and by all the Roman writers *lixivium*; and which differs but little from the lye of the moderns. They procured it by filtrating water through wood-ashes burnt for this purpose. Theophrastus informs us, that the lye, thus acquired, had a reddish appearance, from the soot that adhered to its saline particles during the act of combustion: that, to obtain it in a purer form, it was again strained off through coarse thick bags, and that the lye most in repute was manufactured from the ashes of the oak. Pliny observes (lib. xxxi. 10.) that in his time these ashes were in disuse, because they yielded too small a quantity of saline particles; as also, because in his time an alkaline salt was obtained with ease, and in vast quantities from Egypt. This salt was, unquestionably, the natron of modern chemists.

Of the loom, or its component parts, made use of by the ancients, M. Ameilhon takes no notice; but that it did not differ essentially from that in present use, we may fully collect from our own poet's allusion to many of the principal pieces of which its frame consisted. Thus, Book V. ver. 1385. of this translation; of the original, lib, v. 1349.

Nexilis ante fuit vestis quam textile tegmen;
Textile post ferrum; quia ferro tela paratur:
Nec ratione aliâ possunt tam lævia gigni
Insilia, ac fusei, et radii, scapeique sonantes.

The rude-stitched hide preceded the wove vest,
Plann'd after iron, and with iron wrought;
For, without this, the loom had ne'er been fram'd,
Its shuttles, treadles, sley, and creaking beam.

When the wool, or the woollen stuff, had passed through the lye-water, it was again washed in a full stream, and afterwards soaked in a decoction of a plant, which by the Greeks was called στρουθος or στρουθιον; which possessed the quality of whitening such woollen substances, as we learn from Theophrastus, Dioscorides, and Hesychius: whence, among the Greeks, the verb στρουθιζειν means to whiten or blanch. It is probably the same plant which the Septuagint has in view in those passages in which the verb, in Hebrew denominated ברת (borith), is translated by πλυω, a term occurring in the prophets Jeremiah and Malachi; and which literally signifies to wash, to scour, to cleanse. By the Latins, this plant was named *herba lanaria*, *radix lanaria*, as ap-

So boys asleep, too, deeming near at hand 1045
The public sewer, or close appropriate vase,

pears from Columella, and others; and it is reported not only to possess a power of whitening woollen stuffs, but of rendering them more supple. There can be no doubt, moreover, that this *struthium* of the Greeks, and *herba lanaria* of the Latins, is the *saponaria*, or soap-wort of modern botany, a plant enumerated by Linnéus in the class *pentandria digynia*; and by Tournefort in that of the *lychnis*. Its root is really detersive, and, like soap, removes stains from cloths and stuffs. Of this plant, Dioscorides observes, Στρυθιον γναφικον εστι ω εριοπλυται χρωνται προς καθαρσιν των ερίων: "The struthium (soap-wort) is a plant extremely common, and employed by the fullers to clean their woollen goods."

There is no doubt, that the ancients were in possession of a substance, which they denominated soap; and it is equally unquestionable, that such soap was formed in a manner not very different from our own. This soap was, moreover, of two sorts, soft and hard; but it does not appear that soap was ever employed among the Greeks, nor very early among the Romans, as an article of trade by their fullers or scourers; and, notwithstanding the similarity of manufacture which seems to have prevailed, these soaps, whether hard or soft, were rather unguents for the head than articles made use of for the purpose of blanching. "Prodest est sapo," says Pliny, xxviiii. 12. "Galliarum hoc inventum mutandis capillis. Fit ex sebo et cinere, optimus fagino et caprino. Duobus modis, spissus ac liquidus. Uterque apud Germanos majore in usu viris quam fœminis." "Soap is also useful, which is an invention of the Gauls for deepening the colour of the hair. It is made of suet and ashes; the best being from the suet of goats, and the ashes of the beech-tree. There are two sorts of soap, a solid and a liquid. Among the Germans, the men employ both kinds more freely than the women." That it was applied to the hair for the purpose here specified, we learn from Martial, who, in one of his epigrams, advises an old coquette, who raved at her grey locks, to procure soap-balls from Germany, to change their colour. By degrees, however, and probably first of all about the time of Galen, these soaps began to be employed in the scouring of woollen stuffs, as well as for the purpose of general cleanliness: for, after having stated the different repute of the soaps of different countries, he thus expresses himself, as though he were relating a truth not generally known: "Verum omnis sapo potest omnem sordem de corpore abstergere, vel de pannis." "But every kind of soap is capable of removing filth, of whatever description, whether from the body, or from clothes."

The fullers of Greece and Rome employed also absorbent earths, in conjunction with lyes and detersive plants. These were of various kinds, and from various countries; the most esteemed was that denominated Cimolian earth, from the isle of Cimolis, which was one of the Cyclades, and where it was found in abundance. It was known, at least as early as the time of Aristophanes, who mentions it in his comedy of The Frogs: and it is still in use, according to Bomare, among the inhabitants of the Archipelago, and applied to the same purpose of bleaching stuffs and linens. They also employed another kind of absorbent earth, which was procured in the island of Sardinia; which, however, was principally made use of in cleaning white dresses, and did not equally succeed when applied to coloured: whence it is styled by Nonius Marcellus *inutilis versicoloribus*.

These earths or boles were, for the most part, pressed into the stuffs or cloths by the hands or feet; hence the phrase in Nonius: "Pedibus cretam dum compescis;" and these various operations produce an amazing change in their texture, by driving the web of the woof more closely to that of the chain, and hence blending them more intimately together. When cloths and serges first proceed from the hands of the weaver, they are loose and coarse, and in this state would be but of little value or duration. But by intermingling, and amalgamating the web of the chain with that of the woof, the artist renders both finer and stronger. This operation of fulling, as

Totius humorem saccatum corporis fundunt;
Quom Babylonica, magnifico splendore, rigantur.

before observed, was chiefly produced by the action of the hands or feet; by rubbing with the former, or trampling with the latter, and is significantly expressed by the Greek terms πατειν, συμπατεσθαι, and by Nonius *argutari pedibus*. Rollers were, nevertheless, occasionally employed in this branch of the business, as well for beating as for pressing the cloth; and Cato, among other utensils with which a farm-house ought to be stocked, enumerates, in consequence, the *pilæ fullonicæ*, or fullers' beams or rollers, which, he expressly tells us, were formed of wood. Among ourselves, this branch of the fuller's trade is conducted in a more masterly and scientific manner, by mills which alternately raise and draw down distinct sets of mallets; an invention, nevertheless, which is not of very modern date. Ducange makes express mention of such mills in the twelfth century; and they were probably known at a much earlier æra. This, at least, is certain, that the ancients were sufficiently acquainted with the art of working different machines by the force of water: and the banks of their rivers not only abounded with flour-mills, but with mills for the purpose of working their saws, in the division of stone and rough marble. Thus much we may collect from Ausonius, who in adverting to the Embrus, which emptied itself in the Moselle, speaks of it as

Præcipiti torquens Cerealia saxa rotatu,
Stridentesque trahens per lævia marmora serras.

Bending the mill-stones with its headlong whirl,
The harsh saw dragging through the marble slab.

The ancients were not only acquainted with the art of milling cloths, but also with that of fabricating felts; that is to say, thick and hard substances, which are neither spun, warped, or woven: but composed of hair or wool confusedly intermingled, and which acquire consistence by means of their being squeezed and pressed. This operation precisely resembled that of our modern hatters; nor can we, in any other way, understand the following passage of Pliny: Lanæ et per se coactam vestem faciunt: et si addatur acetum, etiam ferro resistunt. "Wools, even by themselves, are capable of making a thick impacted dress; but if vinegar be added, they will even resist the sword." Instead of vinegar, our own hatters employ acids of a different kind, in the bath in which they press their materials. Felt, indeed, was not unknown to the Greeks, and is by Thucydides (lib. iv.) denominated πιλημα: they even made breast-plates of it for their soldiers; and it is to this fact, probably, that Pliny alludes, when asserting, in the passage above, that it was capable of resisting the edge or point of the sword. It is by no means improbable, however, that the hats or helmets of the Grecian and Roman soldiers were occasionally manufactured from the same substance.

The giving nap to stuffs was also a branch of the fuller's business. This operation the Greeks designated by the verbs γναφειν or γναπτειν, *gnaphein* or *gnaptein)*; and those of our English lexicographers are unquestionably right, who derive the word *nap* from these terms. The French have hardly a term that will correspond with it, for *le poil* applies indiscriminately to hair, beard, and wool, previous to their sustaining any manufacture; and *lainer, to wool*, or *make woolly*, is the common verb which they employ to express the operation of *napping*, or *raising the nap*. The napper himself was by the Greeks denominated γναφευς, and the tool with which he operated γναφος. As to the form of this instrument, the greater part of ancient writers agree in representing it as furnished with points or thorns; and an expression of Plato, ολκη γναφεως, (the napper's drawer, vellicator, or instrument that draws the nap outwards, or towards himself,) seems to imply that those points or thorns were incurvated. Originally, it appears to have been nothing more than a bundle of thorns or thistles dexterously twisted together. The word γναφος is therefore thus interpreted by the scholiast upon Aristophanes, εστι δε ανακαθδες τι ω ξυουσι τα ἱματια: "it is a species of thorny plant with which cloths are scratched." It is described in a manner not very different by Suidas and Hesychius,

Oft lift their skirts the native brine t' eject,
And stain with saffron all the purple bed.

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but more at large in the following of Theophrastus: Το προτερον οι γναφεις ακανθων σωρον συστρεψαντες, τα ἱματια επι τους σωρους εκγνατταν· Ο δε σωρος ελεγετο γναφος. "Formerly fullers, intertwining a bundle of thorns, used it for napping their cloths." The thorny or prickly plants, most commonly employed for this purpose, are described by Dioscorides under the names of ἱπποφαες and ἱπποφαιστον, lib. iv. 162, 163. Ἱπποφας ω γναφουσι τα ἱματια——Ἱπποφαιστον . . . και αυτο γναφικης ακανθης ειδος ὑπαρχον. "The Hippophaes for vellicating or napping cloths."—"The Hippophaiston most esteemed among that species of thorns selected by the fuller."

To these thorns the fuller added also occasionally, as we are informed by Pliny, viii. 37. the skin of the hedge-hog. "If it were not," says he, "for the prickles of this animal, in vain would the luxurious fleece of the fold have been given to mankind: it is from the skin of the hedge-hog that our garments derive their nap." Si non sint illi aculei, frustra vellerum mollitia in pecude mortalibus data; hâc cute expoliuntur vestes. It is truly extraordinary, however, that the ingenuity of the ancients never introduced to themselves the knowledge of the teazle, or fuller's thistle, or urged them to the invention of plates of iron hooks, which are now in general use, I believe, in this country, instead of the former; but which, from the silence of M. Ameilhon upon their construction, do not yet appear to have made their way into France, or at least to have superseded the teazle. M. Ameilhon contends, that although they never applied it to the purpose of vellicating stuffs, they were, nevertheless, well acquainted with the teazle, and that it is to be traced among the Greek and Roman writers, and particularly Dioscorides and Pliny, under the name of Διψακος, or Dipsacus. The Dipsacus, however, is a genus which comprizes a considerable variety of species, of which the teazle forms but one: the description of Pliny and Dioscorides, but particularly that of the latter, are very correct so far as they extend; and their delineation of the little cisterns filled with dew, or rain-water, and which are formed at every clavicle by the curvature of a pair of leaves, is very minute: an admirable contrivance, which is well known by modern botanists to be for the purpose of drowning the little insects which so numerously approach and encumber it; considerable numbers of which are perpetually traced in these pigmy pools of transparent lymph, the taste of which appears to be deceitfully grateful to the unwary crowds it destroys; and which induced the Greeks to bestow on the plant a second name, and to call it λευτρον Αφροδιτης (labrum Veneris, or Venus-lip). But, notwithstanding the exquisite and accurate descriptions, both of Dioscorides and Pliny, neither of them make mention of that peculiar and idiopathic character of the teazle, *its incurvated spines*, which distinguishes this species of Dipsacus from several others of the same genus, and which alone renders it of exclusive value to the manufacturer or fuller. I cannot, therefore, agree with M. Ameilhon, that the ancients were acquainted with the real teazle, or that it is described either by Dioscorides or Pliny: they were acquainted with the Dipsacus as a genus, but not with this particular species of it; and it is the genus alone to which the descriptions of these admirable botanists refer.

Among modern manufacturers, when the woollen stuff has been sufficiently milled and napped, the next operation is that of shearing the flocks which are too long, and picking out those which are too coarse. It is doubted by some critics, whether this branch of the woollen trade was known to the ancients; but there is a passage in Lucian's dialogue of *The Fugitives*, which seems to intimate that something of the same kind at least was in common use among the Greeks: for he there speaks of a man of the name of Cantharus, "who, sitting in the manufacturer's workshops, sheared away whatever superfluous flocks sprouted from the cloth above the rest." Απεκειρε γαρ εν τω γναφειω καθημενος, ὁποσον περιττον τοις ἱματιοις των χροιδων επανθοι. The pickings or shearings thus obtained, were carefully preserved, as at the present day, and employed in the manufacture of

Tum, quibus ætatis freta primitus insinuantur,
Semen ubi ipsa dies membris matura creavit,
Conveniunt simulacra foris e corpore quoque,
Nuntia præclari voltûs, pulchrique coloris,
Qui ciet inritans loca turguida semine multo;
Ut, quasi transactis sæpe omnibus rebus, profundant
Fluminis ingenteis fluctus, vestemque cruentent.

Solicitatur id in nobis, quod diximus ante,

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cushions or matrasses, by the Latins denominated *tomenta*.

Like our workmen of modern times, the fullers among the Romans produced from their stuffs the greatest degree of whiteness, by exposing them to the vapour of sulphur: and Pliny makes express mention (lib. xxxv. 15.) of two sorts of sulphur which were resorted to for this purpose. Apuleius relates a story upon this subject, which is not destitute of pleasantry. Metam. lib. ix. "A fuller's wife," says he, "surprised by the unexpected return of her husband, at the moment of her assignation with a young man, for whom she had a little too much complaisance, concealed him suddenly under an osier basket, over which a piece of woollen stuff was spread to receive the vapour of sulphur. The fuller presently placed himself, together with a friend whom he had brought home with him, at the supper table. During supper, the concealed lover, who was almost suffocated by the exhalation of the sulphur, began to sneeze. The husband, who attributed these sneezings to his wife, returned the civilities due upon such an occasion; but their repetition having convinced him of his error, he abruptly quits the table, and overturns the basket which covers his rival. The scene was on the point of becoming truly tragical; but the countenance of the poor wretch, who was nearly suffocated, disarmed, in some measure, the fury of the husband, and he was suffered to escape without farther harm." We learn from this anecdote, also, that osier or wicker baskets were in use among the ancients; that, in the instance before us, they were applied to the same purpose as among the moderns, and were of the same conical form: vimenea cavea—fustium flexu in rectum aggregata cumulum.

The last operation of our linen and woollen manufacturers is that of giving their cloths a gloss. Whether or not the ancients placed them, for this purpose, as we do, between heated metallic plates, is uncertain; but, at least, they put them in press. The press employed for this purpose was denominated by the Greeks, τρος, and, by Seneca, *tormentum*. The latter writer informs us that it was used as a domestic instrument on this very same account; viz. that of *glazing* or *glossing* linen, or woollen cloths. Placet—non ex arcula prolata vestis, non mille ponderibus, aut tormentis splendere cogentibus pressa. lib. vii. 12. "I do not like the garments which are so carefully preserved in a wardrobe, and which are forced into a gloss by the imposition of a thousand weights, or the use of torturing machines," (tormenta). In this passage, we meet with two modes of glazing: and if that of weight or pressure be not widely different from the modern screw-press, the tormentum, or *torturing* machine, which was probably the real τρος of the Greeks, and, consequently, a heavy beam or roller, might have some resemblance, in the mode of its use, to the rollers of our modern

Or when, at length, the full ripe hour is reach'd
Of vigorous manhood, and the genial stores
Crowd through the members—ceaseless then, at night,
Forms of the fair, of look and hue divine,
Rush on the spirit, and the ducts of love
So titillate, where throngs the new-born tide,
That, as the tender toil were all atchiev'd,
Full flows the stream, and drowns the snowy vest.
For, as we erst have sung, the seeds of life

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mangling machines; and the similarity of idea, conveyed by their names, is truly curious: a mere accident, in all probability, but curious nevertheless.

Some idea of the ingenuity of the ancients, with respect to trades and manufactures, and of their minute adherence to much which is supposed to be of modern origin, may be collected from this brief statement of their various operations in the composition of stuffs and cloths. In every other branch of cloathing, as well as in almost every other branch of arts or sciences, they seem to have been equally fortunate and expert. But to follow them with a mere glance, through the whole, would require a volume instead of a Note. I will only add, with relation to the subject now more immediately before me, that nothing can exceed the judgment with which they selected colours for stuffs, cottons, linens, or silks, or what answered the purpose of silks, when colours were their object in view; or the dexterity with which they applied them. These were extracted both from the vegetable and the mineral kingdoms; and without confining themselves to cloths or silks, they dyed, with equal elegance and effect, leathers, ivory, tortoise-shell, horn, the hair of animals, woods, earths, wax, and even stones and marbles. See Notes on v. 327. and 924. of the present Book; and Book II. v. 239.

Ver. 1048. ——*all the purple bed.*] In the original, v. 1023:

——Babylonica, magnifico splendore.

The Babylon here referred to was a city of Egypt, at no great distance from Cairo: it was universally celebrated, during its prosperity, for its very beautiful embroideries, and, more particularly, the richness and magnificence of its purple colour, extracted from the murex by a process peculiar to itself. In consequence of this circumstance, and, at the same time, of the exorbitant price charged for its introduction, it became by far the most fashionable tincture in all the tapestries, carpets, counterpanes, and sofa coverings of the opulent and luxurious of Greece and Rome. Hence Homer:

——προτέρω ἄγε δῖος Ἀχιλλεύς,
Εἶσεν χ' ἐν κλισμοῖσι, τάπησί τε πορφυρέοισιν.
ILIAD, I. 200.

With that the chiefs beneath his roof he led,
And placed in seats with *purple carpets* spread.
POPE.

Ver. 1057. *For, as we erst have sung, the seeds of life*] Our poet is now proceeding to a task which requires no small degree of delicacy and dexterity in the management of it. He is about to developе, with all the ornaments of verse, the mischievous effects of illicit love, and the entire doctrine of animal generation. It is difficult to enter upon these subjects with so much medical and anatomical science as he has exhibited, without rendering the de-

Semen; adulta ætas quom primum roborat artus.
Namque alias aliud res conmovet, atque lacessit;
Ex homine humanum semen ciet una hominis vis:
Quod simul atque suis ejectum sedibus exit,
Per membra atque artus decedit corpore toto,
In loca conveniens nervorum certa; cietque
Continuo parteis genitaleis corporis ipsas:
Inritata tument loca semine, fitque voluntas
Eicere id, quo se contendit dira lubido:

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scription of either, and particularly of the latter, improper for general perusal. In plain and cautious prose, they are topics which ought not to be indiscriminately submitted to the eye of every one; but when delivered with the necessary decorations, and in the glowing language of poetry, a still greater circumspection should be adopted, even admitting that the utmost degree of address is evinced in the choice of verbiage. Yet why then, it may be inquired, did not the poet abstain from such topics altogether? and why, more particularly, are they not omitted in the present version? For the very reason that Lucretius thought proper to introduce them, I have not thought myself at liberty to suppress them. They are subjects that ought to be treated of, and that must be treated of in some way or other: they naturally fall within the scope of a poem, written expressly upon The Nature of Things: there is a moral in the former, so just, and so pointed, that every libertine ought seriously to peruse, and minutely to ponder upon the whole picture delineated: and amidst the dullness and obscurity generally attendant upon the latter, our poet is entitled to the conjoint thanks of naturalists and anatomical philosophers, for irradiating their dark and thorny paths with the light and fire of the muses. While exquisitely elegant and inviting, our poetic lecturer is at the same time uniformly delicate and grave; nor do I know any description of persons, to whom subjects of this kind ought to be communicated in any shape, but might be prudently entrusted with the conclusion of the Book before us.

In the discussion of illicit love, Lucretius proves himself to be a moralist well acquainted with human life, and delivers his advice from observation and general experience. He allows to the gallant all the pleasures for which he can contend; he paints them in language which the libertine himself cannot call cold or inadequate: he developes all the fond emotions of his heart; he accompanies him through all his scenes of delirious rapture: he concedes to him every thing he can desire: and he then compels him to contemplate his end. He proves to him, from a picture of life itself, that his destruction is inevitable; and that, however happy and prosperous he may be in the outset, or even the middle of his journey, his ultimate perdition is as sure as if he were plunged into it from the first. His general corollary is that of Solomon upon a similar discussion of the same subject, Eccl. x. 9: "Rejoice, O young man, in thy youth, and let thy heart cheer thee in the days of thy youth; and walk in the ways of thy heart, and in the sight of thine eyes: but know thou, that for all these things, God will bring thee into judgment."

First spring when manhood first the frame confirms.
And as on various functions various powers
Alone can act propulsive, human seeds
By nought but human beauty can be rous'd.
These, when once gender'd, from their cells minute
O'er every limb, o'er every organ spread,
Crowd in full concourse towards the nervous fount
By nature rear'd appropriate; whence abrupt
Excite they oft, as forms of beauty rise,
The scenes at hand, the regions rul'd by love.

On the doctrine of animal generation, Lucretius is a lecturer upon natural philosophy: he admits us to his theatre, and gravely and scientifically developes the principles of this important subject: he unlocks the causes of barrenness and fertility: he traces the nascent embryon from the first moment of copulation; and unfolds the principles which were supposed to determine its sex. A serious and attentive reader of this truly learned, as well as poetical discourse, whether male or female, cannot possibly, I think, peruse it without the acquisition of some degree of useful knowledge; and even the medical professor himself cannot but be astonished at the copiousness of its research, and the accuracy that accompanies much of its reasoning.

To this defence of Lucretius I have been compelled, from the unpardonable ill treatment he has uniformly met with from all his English translators, in their version of this part of his poem, and the undeserved aspersions which have, in consequence hereof, been too generally thrown upon his character. With Dryden the defamation began: his loose and libidinous muse was but ill-calculated to decorate subjects of this description with a chaste and delicate attire; and, in his hands, Lucretius becomes a profligate and a debauchee instead of a moralist and physician. To him succeeded Creech, who, glad of the assistance that lay before him, instead of translating for himself, introduced, into his own version, at the close of this Book, the lewd, lascivious ribaldry of his predecessor. But of all who have attempted to give interpretations of this part of our Poem, in any language, Guernier is by far the most unpardonable. With a modesty that would be almost deemed affectation in a female, he blushingly tells us that he can translate no farther. The reader will, in consequence, suppose that here, therefore, he drops abruptly his pen: or that, if he insert any thing more, it will be the Latin text alone. But no such thing: this very modest man, who blushes at the grave and scientific descriptions of Lucretius, and can translate no farther himself, transcribes, into his own page, the gross obscenity of Dryden in its stead, and offers it, to adopt his own expression, as a *vigorous* interpretation of the original. Justly, indeed, does Bayle observe, upon this very portion of our Poem: il y a une grande difference entre les poëtes qui publient des saletes à la maniere de Catulle et d'Ovide, et les poetes qui, pour expliquer les effets de la nature, sont obligés de se servir de mots obscenes. Lucrece est un poete physicien, et les autres font des vers galans: *il lui est permis* de se servir du style des medicines; mais l'obscenité n'est point supportable dans des vers de galanterie. Dict. Art. Lucr.

Idque petit corpus mens, unde est saucia amore.
Namque omnes plerumque cadunt in volnus; et illam
Emicat in partem sanguis, unde icimur ictu:
Et, si conminus est, hostem ruber obcupat humor.

Sic igitur, Veneris qui telis adcipit ictus,
Sive puer membris muliebribus hunc jaculatur,
Seu mulier, toto jactans e corpore amorem;
Unde feritur, eo tendit, gestitque coire,
Et jacere humorem in corpus de corpore ductum:
Namque voluptatem præsagit multa cupido.
Hæc Venus est nobis; hinc ductum est nomen Amoris:
Hinc illa et primum Veneris dulcedinis in cor
Stillavit gutta, et subcessit frigida cura.
Nam, si abest, quod ames, præsto simulacra tamen sunt

Ver. 1068. *Then springs the tender humour, the warm wish*] Whatever degree of imagined indelicacy those of more frigid feelings may trace in the following verses, there is, I think, infinitely more in many parts of Thomson's Seasons, although it is not the fashion, in consequence of the spirit of unfeigned piety and benevolence that pervades his poem, to attribute such a character to it. Almost every feature of the subsequent description will be found to have been borrowed, and introduced into his Spring, where the picture exhibits an equal moral; but I am now alluding more particularly to his episode of Musidora undressing and bathing in the presence of her secreted lover:

——the latent Damon drew
Such madd'ning draughts of beauty to the soul,
As for a while o'erwhelm'd his raptur'd thought
With luxury too daring.

Seasons, ii. 1330.

Throughout the whole of this story, the imagery exhibited is in the highest degree voluptuous, and that without the apology of moral precept, or physiological reasoning.

Then springs the tender tumour, the warm wish
Full o'er the foe, the luscious wound who deals,
With dext'rous aim to pour the high-wrought charge,
And full contending in the genial fight.
So falls the victim on the part assail'd:
With the red blood the glistening bruise so swells;
And o'er th' assassin flows the tide he draws.
So he who feels the shaft of love propell'd
From the dear form of woman, towards the spot
Aims, whence the wound proceeds; supreme he pants
To join the contest, and from frame to frame
Pour the rich humour; for the fierce desire
Now felt, assures how vast the bliss to come.
This, this is Venus, this, he deems, true love:
Hence flow the drops delicious that the heart
Erode hereafter, and its train of cares.
For, though the form ador'd be absent, still
Her phantoms haunt the lover, and his ear

Ver. 1069. *Full o'er the foe, the luscious wound who deals,*] To the same effect, Tasso:

E' dolce campo di battaglia il letto,
Fiavi, e l'erbetta morbida de' prati.

Our field of battle is the downy bed,
Or flow'ry turf amid the smiling mead. Hoole.

Ver. 1072. *So falls the victim on the part assail'd:*] Nothing can be more in point than the similies that occur in this and the two succeeding verses: and nothing can be more delicate. Yet, in several editions, we meet with an arbitrary inclination to omit them altogether. Thus, says Faber, concisely, referring to the original of the verse now quoted, and without offering a single reason for his imperious advice: "*hunc versum cum duobus sequentibus expunge.*" Lambinus exhorts the same, but adds, that he cannot see any connexion between them and the foregoing. Yet, however blind Lambinus or Faber may have been, Wakefield was not afflicted with the same defect of sight: he retains the verses, and comments upon each of them:

Ver. 1082. *Hence flow the drops delicious that the heart*] Thus Euripides:

Ερως, Ερως, ὁ κατ' ομματων

Illius, et nomen dulce obversatur ad aureis.
Sed fugitare decet simulacra, et, pabula amoris,
Absterrere sibi; atque alio convortere mentem;
Et jacere humorem, conjectum, in corpora quæque,
Nec retinere, semel convorsum unius amore,
Et servare sibi curam, certumque dolorem.
Ulcus enim vivescit et inveterascit alundo,
Inque dies gliscit furor, atque ærumna gravescit,
Si non prima novis conturbes volnera plagis,
Volgivagâque vagus Venere ante recentia cures,

Σταζεις ποθον, εισταγων γλυκειαν
Ψυχα χαριν. Hippol. 526.

Love, O Love, who, drops delicious
Oft distill'st from eyes capricious,
Eyes that all the soul excite
To dulcet bliss, and dear delight.—

Ver. 1085. *Her phantoms haunt the lover,*—] The same idea is frequently, and often with great elegance, adverted to by Hafiz in his warm and animated gazels. The following beit or couplet affords an example:

من کلا و تنهاي وصل او هیهات
کجا عچشم به بیذ جیال منظر دوست

Wretch that I am, forlorn and lost
Till she the gloom shall chase,—
Where may my wand'ring eyes accost
The phantom of her face.

So, in a passage not widely different, selected from another gazel:

هم کلستان نکارم زتو پر نقش و نکار
The verdant bower of every thought
With pictures of thy form is wrought.

Ver. 1086. *Rings with her name, whate'er the path pursu'd.*] Hence Thomson, who, as I have already observed, has copied from the conclusion of the Book before us, as largely as was convenient for his purpose:

——she alone
Heard, felt, and seen, possesses every thought,
Fills every sense, and pants in every vein.
Spring, 1070.

The same sensation is described, with equal beauty and delicacy, in the following passage from an Idyl of Gessner, entitled Die Eifersucht, or Jealousy. Mit thränen nahm er abschied vom mädgen, als hätt' er ein weites meer zu befahren, und traurig trieb er die schafe vor sich her. Sich so entfernend seufzt'er wie die turteltaube seufzt, den langen weg hin: gieng durch die schönsten fluren, und sah sie nicht; die schönsten aus-sichten verbreiteter sich, und er fühlte ihre schönheit nicht; er fühlte nur seine liebe, er sah nur sein mädgen, sah sie in ihrer hütte, sah sie bey den quellen im schatten, hörte

Rings with her name, whate'er the path pursu'd.
Yet fly such phantoms, from the food of love
Abstain, libidinous; to worthier themes
Turn, turn thy spirit; let the race at large
Thy liberal heart divide, nor lavish, gross,
O'er one fond harlot thy polluted strength,
Gend'ring long cares, and certain grief at last.
For love's deep ulcer fed grows deeper still,
Rank, and more poisonous; and each coming day
Augments the madness, if the wretch, perchance,
Heal not old wounds by those of newer date,
From fair to fair wide-wand'ring, or his mind

---

seinen namen sie nennen, und seufzte. "With tears took he leave of the maiden, as though he had to cross an immense ocean, and sorrowfully drove he his sheep before him. As sighs the turtle dove, so sighed he along his devious track. He passed through the most beautiful meadows, but he saw them not; the most beautiful prospects presented themselves, but he felt not their charms; he felt only his own passion, he saw only his own damsel, saw her in her cottage, in her shades, by the brink of her native streams;—he heard her repeat his name, and answered her with his sighs."

Ver. 1087. *Yet fly such phantoms, from the food of love*
Abstain,——] In like manner, Thomson in his Seasons:

And let th' aspiring youth beware of love,
Of the smooth glance beware; for 'tis too late
When on his heart the torrent-softness pours;
Then wisdom prostrate lies, and fading fame
Dissolves in air away; while the fond soul,
Wrapt in gay visions of unreal bliss,
Still paints th' illusive form; the kindling grace;
Th' enticing smile: the modest-seeming eye
Beneath whose beauteous beams, belying heav'n,
Lurk searchless cunning, cruelty, and death:
And still, false-warbling in his cheated ear,
Her siren-voice, enchanting, draws him on,
To guileful shores, and meads of fatal joy.
SPRING, 980.

Ver. 1094. ——*each coming day*
Augments the madness,——] Our poet scientifically, and more at large, accounts for this gradual increase of sensual orgasm at v. 1119. and following, to which I refer the reader.

Ver. 1096. *Heal not old wounds by those of newer date,*] The translation is literal: Marchetti, but for what reason I know not, has entirely changed the imagery:

Se tu con dardi novi primi dardi
Prontamente a cacciar non t'apparecchi
Come d'asse si trae chiodo con chiodo;
E con vagante affetto or quello, or questo
Dolce frutto di Venere cogliendo

Aut alio possis animi traducere motus.
Nec Veneris fructu caret is, qui vitat amorem;
Sed potius, quæ sunt sine pœnâ, commoda sumit.
Nam certe pura est sanis magis inde voluptas,
Quam miseris: et enim potiundi tempore in ipso
Fluctuat incertis erroribus ardor amantum:
Nec constat, quid primum oculis manibusque fruantur.
Quod petiere, premunt arte; faciuntque dolorem
Corporis, et denteis inlidunt sæpe labellis,
Osculaque adfligunt, quia non est pura voluptas:
Et stimulei subsunt, quei instigant lædere id ipsum,
Quodquomque est, rabies unde illæc germina turguent.
Sed leviter pœnas frangit Venus inter amorem,

Le fresche piaghe non risani, e volgi
Dell' alma afflitta in altra parte i moti.

Ver. 1100. ——*the pure of heart*
Far surer pleasures, and of nobler kind,] So, Thomson:

But happy they! the happiest of their kind!
Whom gentler stars unite; and in one fate
Their hearts, their fortunes, and their beings blend. Spring, 1110.

To the same effect, Milton, in verses too forcible to be omitted, though too beautiful not to be generally known:

Hail wedded love! mysterious law, true source
Of human offspring, sole propriety
In paradise of all things common else.
By thee adulterous lust was driv'n from men
Among the bestial herds to range; by thee,
Founded in reason, loyal, just, and pure,
Relations dear, and all the charities
Of father, son, and brother, first were known.
Far be it that I should write thee sin or blame,
Or think thee unbefitting holiest place,
Perpetual fountain of domestic sweets!
Whose bed is undefil'd, and chaste pronounc'd,
Present, or past, as saints and patriarchs us'd.
Here love his golden shafts employs, here lights
His constant lamp, and waves his purple wings:
Reigns here and revels; not in the bought smile
Of harlots, loveless, joyless, unindear'd,
Casual fruition.——

Turn from such subjects to pursuits unlike.
Nor are the joys of love from those shut out
Who brutal lust avoid; the pure of heart
Far surer pleasures, and of nobler kind,
Reap than the wretch of lewd and low desires,
Who, in the moment of enjoyment's self,
Still fluctuates with a thousand fears subdu'd;
O'er the fair wanton, dubious, long who hangs
What charm his eyes, his hands shall first devour:
Till fixt, at length, with furious force the spot
Painful he presses, through her luscious lips
Drives his keen teeth, and every kiss indents;
Striving in vain for joys unmixt, and urg'd
By latent stimulus the part to wound,
Where'er its seat, that frenzies thus his soul.
But VENUS softly sooths the wrongs endur'd,

Ver. 1104. *Still fluctuates with a thousand fears subdu'd;*] Wakefield has observed, with his usual comprehension of research, that this, and several of the verses attached to it, have an obvious reference to Euripides:

Τι φῶ σε; πως ἁπαντα
Και ΧΕΡΣΙ, και ΧΟΡΑΙΣΙ,
ΠΟΛΥΕΛΙΚΤΟΝ ἈΔΟΝΑΝ,
Εκπωτι και το δυρο
ΠΕΡΙΧΟΡΕΥΟΥΣΑ, τιρψω
Παλαιαν λαβω χαρμοναν. PHÆN. 320.

Ver. 1105. *O'er the fair wanton, dubious, long who hangs*
What charm his eyes, &c.——] Not dissimilar the following verses from the Latin Anthologia:

Qualis nox fuit illa, dî dîque!
Quam mollis torus! Hausimus calentes
Et transfudimus hinc et illinc, labellis
Errantes animas. iii. 226. 2.

An idea, possessing no small resemblance with the present, occurs in an Indian song translated by Capt. Ashworth, and inserted in Sir W. Ouseley's Oriental Collections. "My soul longs to clasp my beloved in my arms! I will put on my ornaments; I will prepare the bed, and the garlands of flowers.—— One poor heart is come to sacrifice itself *to your beauties—to which shall it make an offering?* to your lips, to your feet, to the missy on your teeth, to your moles, or to your flowing locks?"—The *missy* is a composition with which the teeth are purposely stained.

Blandaque refrenat morsus admixta voluptas.
Namque in eo spes est, unde est ardoris origo,
Restingui quoque posse ab eodem corpore flammam.
Quod fieri contra totum natura repugnat;
Unaque res hæc est, quoius quo plurima habemus,
Tam magis ardescit dirâ cupedine pectus.
Nam cibus, atque humor, membris adsumitur intus:
Quæ quoniam certas possunt obsidere parteis,
Hoc facile expletur laticum frugumque cupido:
Ex hominis vero facie, pulchroque colore,
Nihil datur in corpus præter simulacra fruundum
Tenuia; quæ vento spes rapta est sæpe misella.

Ver. 1118. *The more the soul possesses, still the more Craves she*——] This progressive appetency is a fact, equally, it seems, admitted by the libertine and the philosopher: but the grounds on which they reason are as different as their assertion is alike. In the judgment of Lucretius, the whole pursuit is empty and unsolid, and, on this account, the soul can never become satisfied. As to the libertine, we may collect his judgment from the following verses in Dryden's Tragedy of All for Love; and it is worth while to compare them with the reasoning that ensues in the text:

There's no satiety of love in thee;
Enjoy'd thou still art new; perpetual spring
Is in thine arms. The ripen'd fruit but falls,
And blossoms rise to fill its empty place;
And I grow rich by giving.

But the *moral*, as well as the *description* of our poet is preserved in the following beautiful stanzas of Filicaja, whose muse was always dignified and modest:

Ahi qual fallo è mirar ciò, che mirato
Desta il desire, e col desir tormenta!
Le stelle indarno, indarno accusa il fato
Chi del proprio suo mal fabbro diventa.
Stassi al varco del ciglio, in dolce agguato,
Amor dolce nemico, e mentr' ei tenta
Nel cuor l'ingresso, con felice inganno,
Ospite v'entra, e vi riman tiranno.

Dolce amor diletto, e dolce pena
E la beltà, che con soave forza
Occupa il regno degli affetti, e appena
Mostrasi al cor, che'l signoreggia, e sforza:
Mal, che uccide piacendo, e peste amena,
Che'l senno infetta, e la ragione ammorza;
Luce crudel, che'l fulmine precorre,
E con lucido assalto a gli occhi corre.

Poes. Toscan.

Ah! how perverse to seek, what sought, the soul
Is sure to rouse, and rousing, to torment:
In vain he blames the stars' unjust control
Whose wild desires themselves his ills invent.

And mingling pleasures check the lover's rage.
Then hopes he, too, in the same form to quench
The madd'ning fires whence first the flame arose.
Vain hope, by every fact disprov'd; for this,
The more the soul possesses, still the more
Craves she with keenest ardour. Foods and drinks,
As through the frame they pass, by toil worn out,
Fill many a huge interstice; obvious whence
Dies the dread sense of hunger and of thirst:
But human beauty, and the rosy cheek,
With nought the panting lover can endow
But fruitless hopes, but images unsound,
Scatter'd by every wind. As, oft, the man,

Ambush'd, sweet foe! in eyes that softly roll
Love waits, on visiting the bosom bent:
With guileful grace th' assenting heart he moves,
Enters a guest, but soon a tyrant proves.
Sweet, bitter bliss, dear anguish must he bear
Whose fond affections Beauty once can gain:
Ere thinks the soul resistance to prepare,
She wields her sceptre, and confirms her reign.
Pest! that destroys by pleasing; fatal snare!
The mind that poisons with its dulcet bane;
Remorseless flash! before the bolt that flies,
And its keen mischief darts from radiant eyes.

Ver. 1125. *But fruitless hopes——*
Scatter'd by every wind.——] The passage in the original occurs thus, ver. 1089:

——quæ vento spes rapta est sæpe misella.

and it is equally curious and astonishing to behold the variety of emendations that have been attempted by the learned upon a verse that appears to be as perspicacious in its meaning as any verse in the whole poem, and is literally to be interpreted thus: "which wretched hope is often carried away by the wind." Lambinus has exercised his ingenuity: Faber declares that he devoted full seven days, without the least exaggeration, to the consideration of this section of an individual verse (sex septem dies locum hunc animo versavi, οὐδὲν ὑπερβολικῶς); and at length, by the assistance of heaven ("sic dii! voluistis," says he), he ob-obtained, what he calls a true reading, but which Bentley condemns by an emendation of his own; while he laughs at him for having idly squandered away so much of his time. It would be equally useless to insert the corrections of any of these professed and profound critics. "Rursus," says Wakefield, who felt the meaning of the original too forcibly to think of amending it in any manner: "rursus tam Bentleio quam Fabro, surdas aures nos obvertimus; et opinor lectores nostri:" "Once more turn we a deaf ear, as well towards Bentley as towards Faber; and, if I mistake not, our readers will do the same."

Ut bibere in somnis sitiens quom quærit, et humor
Non datur, ardorem qui membris stinguere possit;
Sed laticum simulacra petit, frustraque laborat,
In medioque sitit torrenti flumine potans:
Sic in amore Venus simulacris ludit amanteis,
Nec satiare queunt spectando corpora coram;
Nec manibus quidquam teneris abradere membris
Possunt, errantes incertei corpore toto.

Denique, quom, membris conlatis, flore fruuntur
Ætatis; jam quom præsagit gaudia corpus,
Atque in eo est Venus, ut muliebria conserat arva;
Adfigunt avide corpus, junguntque salivas
Oris, et inspirant, pressantes dentibus ora,

Ver. 1126. ——*As, oft, the man,*
Parch'd up with thirst, amid his dreams to drink] Apparently, the foundation of the following verses of Garcilasso de laVega, in his dream of Salicio:

Soñaba que en el tiempo del estio
Llevaba, por passar allí la siesta
A beber en el Tajo mi ganado;
Y depues de llegado,
Sin saber de qual arte
Per de susada parte,
Y por nuevo camino el agua se iva:
Ardiendo yo con la calor estiva,
El curso enajenado iba siguiendo
Del agua fugitiva.

I dreamed, beneath the summer beam,
Along where Tagus winds his stream,
My playful flock I led to drink,
And spend the noon-tide o'er his brink.
I reach'd it; but his wonted bed
Saw with surprize the stream had fled:
Parch'd up with thirst, I follow'd still,
Through its new course, the wayward rill;
I follow'd still, but still my lip
Th' illusive wave could never sip.

The resemblance of the present passage of our poet with the following of Isaiah, has been accurately noticed by Dr. Stock, in his admirable version, ch. xxix. 8.

כאשר יהלם הרעב והנה אוכל
וחקין ורקה נכשו
וכאשר יהלם הצמא והנה שתה
והקין והנה עיף
ונפשו שוקקה

Parch'd up with thirst, amid his dreams to drink
Strives, but in vain, since nought around him flows
But void, unreal semblances of floods,
So with her votaries sports the power of love,
False phantoms sole presenting, nor can sight,
Where'er it rove, be sated with the gaze,
Nor can the lover's lawless fingers tear
Aught from his idol, o'er her as he hangs,
And the full charm of every spot explores.
E'en when, in youth's prime flower, his panting limbs
Blend with her limbs that pant, when all his frame
Expects the coming bliss, and Venus waits
To sow the female field, though then amain
In amorous folds he press her, lip to lip
Join, and drink deep the dulcet breath she heaves,—

As when a hungry man dreameth, and lo! he is eating,
And he awaketh, and his appetite is unsatisfied;
And as a thirsty man dreameth, and lo! he is drinking,
And he awaketh, and lo! he is faint,
And his appetite craveth—

Ver. 1130. *So with her votaries sports the power of love,*
False phantoms sole presenting,——] To the same effect, Virgil:

Multa malus simulans, vanâ spe lusit amantem.
Æn. i. 356.

Dissembling deep, he, with unreal hopes,
Beguiled the lover.

Ver. 1136. ——*his panting limbs*
Blend with her limbs that pant, when all his frame] The reader, acquainted with Theocritus, will immediately recal to recollection the following verses of the first Idyll:

Κειρος εφαψαμενη μαλακων εκλιν' επι λεκτρων:
Και ταχυ χρως επι χρωτι πεπαινετο, και τα προσωπα
Θερμοτερ' ης η προσθε· και εψιθυριζδομες αδυ.
Χως κα τοι μη μακρα φιλα θρυλειομι Σελανα,
Επραχθη τα μιγιστα, και ες πυθον ηνθομες αμφω.
Ver. 139.

Ver. 1140. ——*lip to lip*
Join, and drink deep the dulcet breath she heaves.] Thus Claudian, adopting Mr. Wakefield's judicious emendation of *morsus* for *somnus*, as it occurs in the common editions:

Nequidquam; quoniam nihil inde abradere possunt,
Nec penetrare, et abire, in corpus corpore toto:
Nam facere interdum velle, et certare, videntur;
Usque adeo cupide in Veneris conpagibus hærent,
Membra voluptatis dum vi labefacta liquescunt.
Tandem, ubi se erupit nervis conjecta cupido,
Parva fit ardoris violenti pausa parumper;
Inde redit rabies eadem, et furor ille revisit,
Quom sibi, quod cupiant ipsei, contingere quærunt;
Nec reperire, malum id possunt quæ machina vincat:
Usque adeo incertei tabescunt volnere cæco.

Adde, quod absumunt nervos, pereuntque labore:
Adde, quod alterius sub nutu degitur ætas.

Et labris animam conciliantibus
Alternum rapiat morsus anhelitum.
Fescin. v. 121.

To the same effect, and with equal elegance, Mattius, as preserved in Gellius, xx. 9.

Sinuque amicam refice frigidam caldo,
Columbulatim *labra* conserens *labris*.

Thus too the gallant Garcilasso de la Vega, in a beautiful eclogue just referred to:

Boca con boca coge la postrera
Parte del avie que solia dar vida
Al cuerpo.

Ver. 1144. *His total frame, commingled with herself.*] With which, we may not unseasonably once more follow Wakefield, in comparing the following verses of Paulus Silentiarius:

Ειδον εγω ποθεοντας· ὑπ' ατλητοιο δε λυσσης
Δηρον εν αλληλοις χειλεα πηξαμενοι,
Ου κορον ειχον ερωτος αφειδεος, ἱεμενοι δε,
Ει θεμις, αλληλων δυμεναι εις κραδιην. Ep. vii.

Ver. 1150. ——*the fond fever soon,*
The frenzy quick returns,——] Thus Hafiz, with an equal ebullition of passion:

زسوز آتش سوداي عشقش
بسان ديک دايم ميزنم جوش
چو پيراهن شوم آسوده خاطر
گرش همچو قباکيرم در آغوش

Tis useless all: for still his utmost rage
Can nought subtract; nor through the fair one force
His total frame, commingled with herself.
Yet oft thus strives he, or thus seems to strive;
So strong the toils that bind him, so complete
Melt all his members in the sea of love.
And though, when now the full-collected shock
Pours from the nerves, some transient pause ensue,
Yet short its period: the fond fever soon,
The frenzy quick returns, and the mad wretch
Still pants to press the regions press'd before:
Nor aught of antidote exists, so deep
Pines he, perplext, beneath the latent ill.
Then, too, his form consumes, the toils of love
Waste all his vigour, and his days roll on

I rage with fire, with love my heart o'erboils:
Ah! might I, like the lawn's luxurious coils,
Touch but those limbs, but once that snowy breast,
My frantic soul would instant be at rest.

Ver. 1155. *Then, too, his frame consumes, the toils of love*
Waste all his vigour,——] Our poet having duly conceded the pleasures of libertinism, now proceeds to give a summary of its certain and enormous evils. Let the young voluptuary weigh the two statements with a steady hand, and it can no longer be questionable to which path he will incline for the future. The effect here represented by Lucretius, is thus similarly delineated by Juvenal upon another occasion:

Accipiat sane mercedem sanguinis, et sic
Palleat, ut nudis pressit qui calcibus anguem.
Sat. i. 43.

Now let him reap his recompense, and turn
Pale as the wretch, whose unsuspecting foot
Treads naked on a serpent.

Nor with less vigour is this necessary debility of the animal system painted by Dyer:

——now the frame no more is girt with strength
Masculine, nor in lustiness of heart
Laughs at the winter storm, and summer-beam,
Superior to their rage: enfeebling vice
Withers each nerve, and opens every pore
To painful feeling. Ruins of Rome.

To the same effect Thomson:

Labitur interea res, et vadimonia fiunt;
Languent obficia, atque ægrotat fama vacillans:
Unguenta, et pulchra in pedibus Sicyonia, rident
Scilicet; et grandes viridi cum luce smaragdei
Auro includuntur, teriturque thalassina vestis
Adsidue, et Veneris sudorem exercita potat:
Et bene parta patrum fiunt anademata, mitræ;

——the grey morn
Lifts her pale lustre on the *paler wretch*
Exanimate by love. Spring.

So Solomon, among many other resemblances of our poet, Prov. v. 8. 11.

Turn back thy path far from her;
Approach not the door of her house:—
Lest thou bitterly bewail at the last,
When thy flesh and thy body become macerated.

Ver. 1158. *His wealth decays, his debts with speed augment,*] Hence Thomson again:

Neglected fortune flies; and sliding swift,
Prone into ruin fall his scorn'd affairs:—
His brightest flames extinguish'd all, and all
His brightest moments running down to waste.
Spring.

Ver. 1161. *Meanwhile rich unguents from his mistress laugh;*
Laugh from her feet,——] On the audacity of this favourite catachresis of our poet I have already had frequent occasions of commenting. See Note on v. 85. of this Book. The unguents and perfumes made use of in former ages, and applied to every part of the body, are almost innumerable. Our modern extravagance, in this respect, is nothing to what Athenæus relates existed in his æra, when it was the custom to apply a different essence, of which every one was very expensive, to almost every limb; the Egyptian to the feet and legs; the Phœnician to the cheeks and bosom; the Sisymbrian to the arms; and the Amaracine to the neck and knees.

It is truly curious, indeed, to observe the universality of this fashion of applying unguents to the whole, or the greater part of the body among mankind, in every age, and every state of society. At the very time that it thus prodigally prevailed among the polite and voluptuous nations of Greece and Rome, it was equally in vogue among the barbarous inhabitants of Britain. Nor have modern adventurers discovered the existence of any people whatsoever, where it has not been found a custom established immemorially amongst them. The polite Otaheitan, and the stupid Eskimaux; the active Chinese, and the indolent Arab, the beautiful Circassian, and the deformed Caffre, the negro of Gambia, and the olive-coloured Caribbee, all equally in every variety of climate and of manners, exhibit a fondness for unguents. Among Europeans, these unguents are generally applied to the head and face, and to no other part of the body: among the Georgians, the head and face are left perfectly free, but the body is uni-

In vilest bondage. Amply though endow'd,
His wealth decays, his debts with speed augment,
The post of duty never fills he more,
And all his sick'ning reputation dies.
Meanwhile rich unguents from his mistress laugh;
Laugh from her feet, soft Sicyon's shoes superb:
The green-ray'd emerald o'er her, dropt in gold,
Gleams large and numerous; and the sea-blue silk,
Deep-worn, enclasps her, with the moisture drunk
Of love obscene. Whate'er his sires amass'd

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versally anointed: while the generality of the Persians confine them to the fingers and the feet. In some instances, the application is simple grease; in others, the grease is combined with odours, but not coloured; and in others, again, it is coloured, but not perfumed. The colours, moreover, made choice of, are almost as various as the nations that adopt them—blue, brown, red, green, black, and white, each has its votaries in different parts of the world: and the scents employed are selected as capriciously as the colours. What is fetid to one nation, is most fragrant in the estimation of another. Among some classes, we find the unguent washed off, and carefully renewed every day: among others, we find it tattoed, and engrained into the very skin. It would not be an idle occupation for the naturalist to inquire into the origin of this universal practice of anointing, and whether any advantage to the general health, the beauty, or the strength of the body, be derivable from it?

Ver. 1162. ——*soft Sicyon's shoes superb:*] Sicyon was a city of Peloponnesus, celebrated for the voluptuous effeminacy of its inhabitants in every part of their attire, but particularly in the splendid luxury of their shoes and sandals. Cicero declares, that on account of this delicate and unmanly appearance, he should be ashamed to wear the Sicyon shoes, if any were made him a present of; and though they were adapted to his feet with the utmost dexterity and ease. "Si mihi calceos Sicyonios attulisset, non uterer, quamvis essent habiles, et apti ad pedes, quia non essent viriles." De Orat. i. 54.

Ver. 1164. ——*the sea-blue silk,*] Thalassina vestis, (αλισπορφυρος.) Des Coutures has committed an extraordinary mistake in this place by understanding the term thalassina, (sea-blue) to intimate the name of a town: and accordingly he renders it "the blue dress of Thalassia." L'azur des habits de Thalassie perd sa coulour, &c.

Plautus, if any dispute could have arisen, has reduced the meaning of Epicurus to a certainty, in the following verse:

Palliolum habeas ferrugineum: nam is color *thalassicus.*

Steel-blue thy robe, the true *thalassic dye.*
Mil. Glor. iv. 45.

Ver. 1165. ——*with the moisture drunk*
Of love obscene.——] Thus Cowper, adverting to the want of discipline in our universities, and the consequent negligence of the clerical order:

See, then! the quiver broken and decay'd,
In which are kept our arrows. Rusting there

Interdum in pallam, atque Alidensia, Chiaque, vortunt.
Eximiâ veste et victu convivia, ludei,
Pocula crebra, unguenta, coronæ, serta, parantur;
Nequidquam; quoniam medio de fonte leporum
Surgit amari aliquid, quod in ipsis floribus angat:
Aut quom conscius ipse animus se forte remordet,

In wild disorder, and unfit for use,
Their points obtuse, and *feathers drunk with wine.*
Task, B. II.

But the metaphor here adopted is more audaciously employed by the German poets, than by those of any other nation with which I am acquainted. Thus Klopstock, in his Messias:

Sieht er den göttlichen kommen, so geht en *von seligkeit trunken,*
Ihm entgegen. Ges. iii.

The godlike man forth-coming he descries,
And, *drunk with holiness,* to meet him flies.

And, again, in one of his most beautiful odes, entitled Die Beiden Musen (The two Muses):

schon hub sich der herold
Ihr die drommet und ihr *trunken* blick schwamm.

The herald uprose, blew his trumpet before her,
Her *drunken eyes* swam.

Here, too, the sacred writings furnish us with a parallel metaphor, and used with an equal degree of energy:

My *arrows* will I make *drunk with blood,*
And my *sword* shall *banquet upon flesh;*
With the blood of the slain and the captive,
With the utmost vengeance of an enemy.
Deut. xxxii. 42.

Ver. 1167. *Now flaunts in ribbands, in tiaras flames*
Full o'er her front, ——] In the original, thus:

Et bene parta patrum fiunt anademata, mitræ.
Ver. 1122.

The anadema (ab ἀναδέω, redimire) was an ornamental bandeau of ribbands, elegantly interwoven with the hair of the head, such as is not unfrequently met with in the present day among our fashionable fair. Marchetti has translated the term by the phrase fasce di ghirlande, "wreaths of garlands;" which, however, does not exactly correspond to the anadema of the Greek and Roman ladies. It sometimes also means the graceful bow of ribbands, or golden chains, with which the mitre or tiara was tied under the chin; the mitre itself being a coronet or turban cap, adapted to the upper part of the head, and splendidly decorated with emeralds and pearls, of the former of which our attentive author has already taken notice. A dress, not widely varying from this was sometimes affected, even by young men who were notorious for their voluptuousness and effeminacy. Thus Virgil:

Et nunc ille Paris cum semiviro comitatu,
Mœoniâ mentum *mitrâ* crinemque madentem
Subnexus, rapto potitur. Æn. iv. 215.

And still this Paris, with tiara tied
His chin beneath, and liquid locks, enjoys,
Mid throngs effeminate, his theft of love.

With respect to the anadema, there are several of our earlier English poets who understand it in the sense attributed to it by the Florentine translator. Thus Brown in his Pastorals:

Now flaunts in ribbands, in tiaras flames
Full o'er her front, and now to robes converts
Of Chian loose, or Alidonian mould:
While feasts, and festivals of boundless pomp,
And costliest viands, garlands, odours, wines,
And scatter'd roses ceaseless are renew'd.
But fruitless every act: some bitter still
Wells forth perpetual from his fount of bliss,

The lowly dales will yield us *anadems*
To shade our temples; 'tis a worthy meed;
No better *girlond* seeks mine oaten reede.

It answers to the שבס of the Hebrew Ladies, as the tiara probably does to the פאר: both of which form a part of the female wardrobe so amply detailed by Isaiah, ch. iii. 18—24.

Ver. 1169. *Of Chian loose, or Alidonian mould:*——] I read the original with Mr. Wakefield, and with almost all the manuscript copies:

—— in pallam, atque Alidensia, Chiaque vortunt.

In the common editions and translations, we uniformly find it:

——in pallam, ac Melitensia, Ceaque vertunt.

Why this unnecessary variation, which was first suggested by Adr. Turnebus, should have been so generally adopted, I know not. Alinda and Chia (for the island of this latter name is not here referred to) are both stated by Arian to have been cities of Caria on the borders of Lydia, the effeminacy of the inhabitants of which last province is known even to a proverb: and is hence referred to by Virgil in the preceding note, under the term Mœonia, the ancient appellation of Lydia. Hence Dryden, in his Alexander's Feast:

Softly sweet in Lydian measures,
Soon he sooth'd his soul to pleasures.

Ver. 1171. ——*garlands, odours, wines,*
And scatter'd roses ceaseless are renew'd.] Thus, Dyer, in his Ruins of Rome:

——while luxury
Over their naked limbs, with wanton hand,
Sheds roses, odours, sheds unheeded bane.

Ver. 1173. ——*some bitter still*
Wells forth perpetual from his fount of bliss,] This passage may challenge, I think, all the efforts of all the muses in every age and nation, as well for the elegance of its numbers and imagery, as the sound and important moral it contains. It should be read and retained in his heart, by every libertine that breathes. Yet this is the poet who has been painted to the vulgar as the captain-general of voluptuousness and debauchery!

Lambinus has observed, that he seems, in this distich, to refer to the term γλυκυπικρος, (bitter-sweet,) and more particularly to the following verse of Musæus, who employs it on a similar occasion:

Ηδη και γλυκυπικρον ελιξατο κεντρον Ερωτων:

She felt the dulcet bitterness of love.

But there is a moral in Lucretius which is not even hinted at in Musæus, and which is worth all the mere verbal descriptions in the world.

In the following, from the Spanish of Figueroa, denominated by his own countrymen, from the beauty of his poetry, *the Divine*, there is an idea somewhat similar, and justly entitled to notice:

Mas eterno amargor halla escondido,
Qual está espina entre purpureas rosas.

Desidiose agere ætatem, lustrisque perire;
Aut quod in ambiguo verbum jaculata reliquit;
Quod, cupido adfixum cordi, vivescit, ut ignis:
Aut nimium jactare oculos, aliumve tueri,
Quod putat; in voltuque videt vestigia risûs.

Atque in amore male hæc proprio, summeque secundo,
Inveniuntur: in advorso vero atque inopi sunt,
Prehendere quæ possis, oculorum lumine operto,
Innumerabilia: ut melius vigilare sit, ante

But endless bitters there lie hid
As thorns the roses' blooms amid.

So, and more emphatically still, Deut. xxxii. 32.

Their grapes are the grapes of gall:
Their clusters are deadly bitterness:
The poison of dragons is their wine;
Their pure wine the venom of asps.

This, and several preceding verses, are thus beautifully imitated by Thomson:

E'en present in the very lap of love
Inglorious laid, while music flows around,
Perfumes, and *oils*, and *wines*, and *wanton hours*;
Amid the roses fierce *Repentance* rears
Her snaky crest: *a quick-returning pang*
Shoots through the conscious heart.

Ver. 1178. —*some phrase of doubtful import darts,*] In the original, v. 1130:

——in ambiguo verbum *jaculata* reliquit.

And thus Homer:

Ὃς τον λωβητηρα επιστολον ισχ' αγορᾳων: Il. B. 275.

Who silenc'd soon this slander-*darting* wretch.

In the Proverbs, the same subject is brought forwards, and with wonderful similarity of imagery. Thus, vii. 22, 23:

Headlong he followeth her,
As the ox goeth towards the shambles—
Till a *dart strike through his liver.*

The original is peculiarly expressive. The Hebrew verb פלח, here, and generally translated *strike through*, means rather to *plough through*, or *furrow deeply*, αυλακιζειν. The Arabians still retain the same term, and in the same sense, فلح. The liver was equally supposed, by the Greeks, and Asiatics, to be the immediate seat of appetite and desire; and the passage in Psalm xvi. 9. commonly translated, "my *glory* rejoiceth," is, literally (כבד) "my *liver* rejoiceth;" and would have been far better rendered "my *desire*," than "my *glory*." Thus, Theocritus:

εχθιστον εχων υποκαρδιον ελκος,
Κυπριδι τα μεγαλας τω ἰ. ΗΠΑΤΙ παξε βελεμνος.

Id. Ψ. 15.

And poisons every flowret. Keen remorse
Goads him, perchance, for dissipated time,
And months on months destroy'd; or from the fair
Haply some phrase of doubtful import darts,
That, like a living coal, his heart corrodes:
Or oft her eyes wide wander, as he deems,
And seek some happier rival, while the smile
Of smother'd love half dimples o'er her cheeks.
Such are the ills that on amours attend
Most blest and prosperous; but on those adverse
Throng myriads daily, obvious and more keen.
Hence, by the muse forewarn'd, with studious heed

A wound within he bears, a grievous smart,
For through his *liver* Love has struck his dart.

So, Horace:

Cum tibi flagrans amor, et libido
Sæviet circa JECUR ulcerosum. Od. l. i. 25.

When raging love, and fierce desire
Shall all thine ulcer'd *liver* fire.

Ver. 1179. *That, like a living coal, his heart corrodes:*] In the similar description of Solomon we again trace the same metaphor:

Can a man surround *his bosom with fire*,
And his cloaths not be burnt?
Can a man tread *upon live coals*,
And his feet not be corroded?

Prov. vi. 27, 28.

This imagery of the Hebrew moralist refers, however, as directly to the future as the present effects of illicit love. "Can a man thus *burn* with a lawless passion, and his fame, his fortune, his reputation, whatever surrounds his person, be not hereby totally *consumed*, and himself become *naked*, needy, and despised? Can a man tread on live coals, and not exhibit the felon marks of convicts who have been sentenced to such a punishment? Must not his guilt be rendered obvious, and his company be avoided by every one?" Upon this point our own poet has already touched, ver. 1155.

"Then, too, his form consumes, &c."

The Hebrew term חתה, which I have above rendered *surrounded*, is not done justice to in our common version: "Can a man *take* fire, &c.?" It conveys a much more definite and impressive idea, and means either to *implicate* or *blend together*; or else, to *marginate*, or *encircle with a border*. The Arabians, who have also borrowed this term from the Hebrews, still retain it in both senses, and in two different forms: حتا, and حتي. The English version is adopted from Pagninus: "numquid *accipiet* vir ignem, &c.?"

Ver. 1181. ——*while the smile*
Of smother'd love half dimples o'er her cheeks.] Nothing can be more obvious than the meaning of our poet, which is fully interpreted, if I mistake not, in the version before us:

——in voltuque videt vestigia risûs.

Quâ docui ratione, cavereque, ne inliniaris.
Nam vitare, plagas in Amoris ne jaciamur,
Non ita difficile est, quam captum retibus ipsis
Exire, et validos Veneris perrumpere nodos.
Et tamen inplicitus quoque possis, inque peditus,
Ecfugere infestum, nisi tute tibi obvius obstes,
Et prætermittas animi vitia omnia primum,
Ut quæ corporis sunt ejus, quam perpetis, ac vis.
Nam faciunt homines plerumque, cupidine cæcei,
Et tribuunt, ea quæ non sunt hiis conmoda vere.
Multimodis igitur pravas, turpeisque, videmus
Esse in deliciis; summoque in honore vigere.
Atque alios aliei inrident, Veneremque süadent
Ut placent, quoniam fedo adflictentur amore;
Nec sua respiciunt miserei malum maxuma sæpe.

Marchetti, therefore, evidently errs in the diffuse translation he has given us of it:

——e troppo gli volgi (occhi) al suo rivale,
E con lui troppo parla, e troppo ride.

Ver. 1186. *Hence, by the muse forewarn'd, with studious heed*
Shun thou, &c.] Solomon, towards the close of his delineation, adopts a similar apostrophe:

Listen to me, therefore, O young men!
And ponder the words of my mouth.
Let not thy heart plunge into her paths,
Stray not thou within her boundaries.
Prov. vii. 24.

In this passage, the Hebrew term שטה, here translated *plunge*, is rendered in the standard version, but with far less appropriation, *decline*. Its direct reference is to the headlong vehemence of a spirited and restive horse, who will not submit to the curb. בנתיב תיה, "*within her boundaries*," in the same translation occurs, "*in her paths*." The original will admit of either reading; but the former is the stricter, and the more elegant. The royal apophthegmatist obviously insinuates that her dwelling is surrounded with a line of circumvallation, from which it is not easy to escape without danger. And hence only the propriety of the ensuing verse:

Shun thou the toils that wait: for easier far
Those toils to shun, than, when thy foot once slides,
To break th' entangling meshes, and be free.

Yet though ensnar'd, and in the silky net
Led captive, thou may'st still, if firm of mind,
And by these numbers sway'd, thy foot release.—
First, the defects, then, of the form ador'd
Of mind, or body, let thy memory ne'er
One hour forget; for these full oft mankind
See not, by passion blinded; while, revers'd,
Charms they bestow which never were the fair's.
Hence frequent view we those, each grace denied,
The coarse, the crooked, held in high esteem.
And lovers laugh o'er lovers, and exhort
Offerings to Venus since so vilely sway'd,
While yet themselves are sway'd more vilely still.

For many, stricken by her, hath she fell'd;
Yea, numerous are the valiant whom she hath slain.

Ver. 1189. *To break th' entangling meshes, and be free.*] I cannot avoid once more tracing the minute similarity of imagery between the pictures of Lucretius and of Solomon:

Headlong he followeth her—as a bird hasteneth to its snare,
And knoweth not that its life is "*concerned*" in it.
Prov. vii. 22, 23.

The very same metaphor occurs, indeed, in a preceding chapter: vi. 5.

Rescue thyself as a *roe* "*from the snare*;"
As a bird from the net of the fowler.

In this passage, however, the common Hebrew reading is obviously defective, the first line of this couplet terminating with the word *roe*. The word הכליט, or some similar term answering to the latter part of the verse, as it stands in our Bible translation, seems, moreover, to have existed formerly in the original, since a similar phraseology is traced in many of the oldest versions. Thus the Chaldaic gives us מן נשכא; the Syriac, ܡܢ ܟܣܒܐ; and the Septuagint, which I have more immediately followed, Σὺ δὲ ῥῦσαι ΕΚ ΒΡΟΧΩΝ.

Nigra μελιχροος est ; inmunda ac fetida, ακοσμος·
Cæsia, Παλλαδιον· nervosa et lignea, Δορκας·
Parvola pumilio, Χαριτων μια, tota merum sal ;
Magna atque inmanis, καταπληξις, plenaque honoris :
Balba, loqui non quit ? τραυλιζει· muta, pudens est ;
At flagrans, odiosa, loquacula, Λαμπαδιον fit :
Ισχνον ερωμενιον tum fit, quom vivere non quit
Præ macie ; ῥαδινη vero est, jam mortua tussi :
At gemina et mammosa, Ceres est ipsa ab Iaccho :

Ver. 1205. *The red-ey'd is a Pallas* ;——] In the original, ver. 1154 :

Cæsia Παλλαδιον——

The eyes of Pallas are uniformly represented by Homer as of a reddish grey, by a term almost appropriated to herself, γλαυκος : a term which was probably typical of her internal radiation, as the goddess of wisdom. The eye of the owl possesses the same combination of colours ; and hence, perhaps, one reason for appropriating this bird to Minerva. In Marchetti, we find *cæsia* translated "*sky-blue*," which makes nonsense of the original, unless we can conceive that eyes of such a tincture were held in universal abhorrence among the Romans :

——Pallade somiglia
Chi gli occhi ha tinti *di color celeste.*

Lucretius has been copied in this passage by Ovid Art. Am. ii. 659 : though he is suspected to have been himself in some degree indebted to Theocritus, I. 25. who in his turn is accused of having borrowed from Plato, Polit. T. II. p. 474. ed. Steph. as transcribed by Plutarch, V. II. p. 474.

The passage in Theocritus is as follows :

Βομβυκα χαριεσσα, Συραν καλεοντι τυ παντες
Ισχναν, αλισκαυστον· εγω δε μονος μελιχλωρον.
Και το ιον μελαν εστι.

Thee, Bombyx ! thee a siren all affirm
Graceful, but *sun-burnt* :—*honey-hued* the term
I give thy beauties—lovely in my eyes
As the pure black the violet that dyes.

In Ovid, it occurs thus, as correctly amended by Bentley :

Si *straba sit*, Veneri similis ; si *rava* Minervæ
Sit gracilis, macie quæ male viva suâ est.
Dic habilem, quæcunque brevis ; quæ turgida, plenam :
Et lateat vitium proximitate boni.

Leers she, she's Venus ;—Pallas, if red-eyed ;
Graceful, if hectics waste her to a shade ;
If small, alert ; if large, a portly bride :
Thus let some virtue every vice evade.

Ver. 1214. *The broad, big-bosom'd,* Ceres *full display'd,*] Ceres, the divine object of the Eleusinian mysteries, was always thus delineated, as

To such the black assume a lovely brown,
The rank and filthy, negligence and ease.
The red-ey'd is a Pallas; the firm-limb'd,
All bone, a bounding roe; the pigmy dwarf
A sprightly grace, all energy, and wit;
The huge and bulky, dignified and grand;
The stammerer lisps; the silent is sedate;
The pert virago, spirit all and fire;
The hectic, fine and delicate of frame;
The victim worn with pulmonary cough,
On life's last verge, a maid of matchless waist.
The broad, big bosom'd, CERES full display'd,

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well by painters as poets. The fiction of her union with Bacchus was probably a mere allegory for that of bread and wine, so necessary for the continuance of both life and love. Hence the declaration of Terence:

Sine Cerere et Libero friget Venus.

Without Bacchus and Ceres, e'en Venus grows cold.

Des Coutures gives us the following version of this passage: "Si sa gorge *epouvante de ses deux globes*, c'est la veritable Ceres que Bacchus aima."

The Ceres of the Romans was one of the deities to whom the supreme title of Demeter (Δημητηρ) was universally attributed. Her name was derived from γηρω—"born of the earth;" whence she became the type of all the Earth produces; and, in the confusion of ancient mythology, was occasionally addressed as the Earth, Demeter, or "great mother of Gods and men;" partook of the same apotheosis as the Earth properly so called; and was honoured with a similar ceremony of having fruits and flowers strewed from an ark or basket borne through the streets, in a solemn procession of her priests on the close of the harvest. Yet, adverting to her actual origin, the poets feign her to have been the daughter of Saturn and Ops; and so far they concur with the theory advanced upon this subject by Mr. Bryant, who asserts that the term Saturn was originally applied to the Heavens, or the Sun, that illumines the Heavens, and that Ops was only another title for the goddess Γης Δημητηρ, or the Earth: whence we are at no loss for the antiquity of this fable, since both words are either of Chaldaic or Egyptian origin. Saturn, Saturnus is with him Ca-T'-Our-Ain-Es, "the temple of the illustrious fountain of fire:" whence the Greek Ουρανος, which is simply the Sun, or "the illustrious fountain of fire itself." On the term Ops, from the Greek Οπ, I have already had occasion to observe in the Note on Book II. 1167, and have traced its origin to the Ob, or Oub of the Chaldees, and the ϩΟϥ (hoph, or οφις) "a serpent" of the Egyptians. It may appear at first sight extraordinary, and almost impossible for the most fanciful of ancient idolaters to transfer the word ϩΟϥ or Ops, "the Serpent," to Demeter herself, the great mother of gods and men, so as that

Simula, Σιληνη ac Σατυρα est: labrosa, φιλημα.
Cætera de genere hoc, longum est, si dicere coner.

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she could by any means become possest of such a title. But if the reader will refer to the Note on Book II. 1167. he will there find that the term Δημητηρ, which was afterwards applied to the goddess Γη, or great body of the Earth, was originally attributed to Venus, or the Egyptian Aphrodite, who was also regarded as the great parent, or mother of gods and men. Venus, or Aphrodite, is universally represented, however, not only in this character of having given birth to all things, but as having herself arisen from the ocean. And the reader will there find that the Demeter, Venus, or Aphrodite, was nothing more than a type of the ark, containing within its womb the race of future heroes who would be deified, that of men and of animals; and existing alone upon a fathomless and unbounded ocean. The Serpent, Hoph, or Ops, was uniformly worshipped in Babylonia and Egypt, from the supposed possession of wisdom, and, consequently, the power of protection: he was represented as hovering over this Ark, or Venus Demeter, in the form of a Dragon, or winged Serpent: and when the same fact was alluded to, under the type of a mundane egg floating upon the surface of the waters, and containing within itself the elemental germs of the future world—as encircling it with its glittering scales for the same express purpose. In this manner, therefore, the ϩ ϥ Ops, or Serpent, became a constituent part of the hieroglyphical figure of Venus, or Aphrodite Demeter; and communicated to it his express name. And when, in process of time, the term Demeter was also applied to the Earth, and this, under another system of idolatry, was conceived to be the common parent, or mother of all things, the additional term ϩ ⲟϥ was communicated to her at the same period, and became a commutable denomination.

With respect to Bacchus, he is well known to have been one of the earliest deities of Chaldea, as his name, indeed, sufficiently explains, which is literally (ברכוש) Bar-Chus, "the son of Chus." But Chus, or Chush, was the son of Ham, and consequently the grandson of Noah. We may naturally conclude, therefore, that he was an early descendant of this venerable patriarch, and a Cushite or Hammonian of considerable celebrity, who pursued, with peculiar eminence, the favourite occupation, after the flood, of his great progenitor Noah, and, like him, "was an husbandman, and planted vineyards." Of which also, like Noah, it should seem, from the traditions generally attributed to him, that he liberally partook, "became drunken, and was uncovered within his tents." Gen. ix. 20, 21. And hence the first origin of that devotion which was paid to him after his idolatrous deification by his descendants, as the god of the vine; as well as the orgies, or obscene and inebriate rites, with which he was annually celebrated.

Bacchus, in the table of ancient mythology, however, is stated to have been the son of Semele, by Jupiter Ammon. The history is given at full length, in Diod. Sic. i. p. 247. Ed. Wessel. and the fable admits of an easy solution. It would occupy, however, too much space to unfold it in the present Note; and I refer those who are anxious for further information to Mr. Allwood's Literary Antiquities of Greece, Sect. iii. p. 161. Jupiter Ammon, or Hammon, is doubtless a deified personification of Ham, the father of Chus, adored under the title of the Sun, or the most glorious of existent beings; for Ham-On is strictly Ham, the Sun, and is nearly analogous to the dignified appellations at present common to every Oriental prince, who is styled "Lord of the Sun and Moon," or "of the Heavens and the heavenly Hosts." In the perplexity of ancient mythology, however, Noah, Ham, and Chus, from having this title applied to them, were severally worshiped at different times as the Sun himself:—and Bacchus, who succeeded to the same honorary distinction, was confounded in the same manner with the supreme object of solar idolatry, and regarded as

Hot from the bed of Bacchus; the flat-nos'd 1215
Of monkey shape, a Satyr from the woods;
And the broad-lip'd, a Nymph for kisses form'd.

Dionysus, Osyris, or the Sun, all which, according to Diodorus Siculus, vol. i. p. 17. were parallel and convertible terms: for Dionysus, or Thyonysus, derived from Thu-On-As-Es, implies "the illustrious region of sacrifices offered to the Sun;" and of course means literally "the temple of the Sun:" and Osyris, derived in like manner from As-Ur-Es, strictly "the region of the radiant or illustrious Sun," refers to the same structure, or may literally be rendered the Sun himself. The mythological mother of Bacchus was Semele (Shem or) Sem-EL-A, "the region of the god Shem;" for Shem, it should seem, was also deified in these idolatrous times, as well as his brother Ham.

It is stated by some critics, and particularly by Prætextatus upon Macrobius, Saturnal. i. 18. that as Bacchus was often represented as the Sun, so Ceres, the divinity to whom he was attached, was equally expressive of the Moon; and a new allegory or fable is hereby produced, elegantly and pertinently typical of the changing seasons, and the fertilizing power of the solar orb, without the conjoint influence of which the earth would be a barren wilderness. And it is not improbable that Ceres was thus occasionally represented, from the confusion of applying one common name to several divinities. The more general name for the Moon was Diana, probably derived from the Chaldee Thoth, similar to the Egyptian Thuth, or, as Herodotus writes it, Xuth: from Thoth, Thos, Θως, Διος, Διαν, Διανα, Diana. But Thoth or Thuth refers, as I have already observed in Note on Book II. 1167. to Noah, the great builder of the ark; and Thyana, or Diana, ought, therefore, in like manner, to refer, and actually did do so originally, to Aphrodite or Venus, the symbolical female power under which this vessel was typified while on the deluge, who, in consequence hereof, was denominated by the Egyptians ΠΑΟΑΡ and ΠΑΟΩΡ (athor), whence ΠΑΟΩΡ ΟΒΑΚΙ, "the city of Venus, or Athor," and whence also Thyatyra, Thu-Athor-A in Lybia. But from the crescent form of the ark, the crescent was an image always reverenced by arkite idolators of every description, and became eventually typical of the arkite goddess herself: hence, both the moon and the cow, in consequence of the form of their *horns*, became emblems of Isis, and Athor or Venus, which are convertible terms, and this deity was eventually worshipped under each of these figures. But Isis or Venus, as I have already observed, was the goddess Demeter; Demeter was therefore the Moon: and hence, when at length the term Demeter was bestowed upon Ceres, she also came into possession of that of the Moon, Thyana, or Diana. And it is to this new character of Bacchus and Ceres, as symbolical of the Sun and Moon, that Virgil evidently alludes:

——Vos, o clarissima mundi
Lumina, labentem cælo quæ ducitis annum,
Liber, et alma Ceres.

Georgics, i. 5.

——Ye lights of heaven! whose sovereign sway
Leads on the year around th' ethereal way,
Bacchus and Ceres!

Plutarch, indeed, expressly tells us, that Osyris, Bacchus, Serapis, Sol, and several others, signify the same deity. And Apuleius, that Isis, Venus, Diana, Ceres, Minerva, and many more, constitute but one goddess under a variety of names.

Ver. 1215. *Hot from the bed of* Bacchus;—] The attachment of Bacchus to nymphs of this luxuriant form, is thus glanced at by Anacreon:

Στεφος οιυμι, και λυρισ-
Παρα σοις Διονυσε σηκοις
Μετα κουρης ΒΑΘΥΚΟΛΠΟΥ
Ροδινοισι στεφανισκοις
Περικασμενος, χορευσω. Od. v.

Sed tamen esto jam quanto vis oris honore,
Quoi Veneris membris vis omnibus exoriatur ;
" Nempe, aliæ quoque sunt : nempe, hac sine viximus ante :"
" Nempe, eadem facit, et scimus facere omnia turpeis ;"
" Et miseram tetris se subfit odoribus ipsa :"
Quam famulæ longe fugitant, furtimque cachinnant.

At lacrumans exclusus amator limina sæpe
Floribus et sertis operit, posteisque superbos

Then bring me, showers of roses bring,
And shed them round me while I sing
Great Bacchus ! in thy hallow'd shade
With some *luxuriant-bosom'd* maid.

Ver. 1216. ——*a* Satyr *from the woods* ;] The satyrs, as is generally known, were imagined of celestial origin : but Silenus himself, and all the sylvan gods and goddesses, are painted with flat, monkey noses ; while the animal of this name, in natural history, is obviously of the monkey class.

In Cowley, we meet with the following imitation of the entire passage before us :

Colour or shape, good limbs or face,
Goodness or wit in all I find ;
In motion, or in speech or grace :
Or if all fail me, still 'tis womankind.
If tall, the name of proper, seize :
If fair, she's pleasant as the light ;
If low, her prettiness does please ;
If black, what lover loves not night ?
The fat with plenty fills my heart ;
The lean, in love, too, makes me so ;
If strait, her body's Cupid's dart
To me ; if crooked, 'tis his bow.

Ver. 1217. *And the broad-lip'd, a* Nymph *for kisses form'd.*] Upon which passage, the grave Dion. Lambinus asserts, as though possest of an ample experience, that " the sweetest kisses are given by the fair who are possest of large lips." Suavius, says he, viros osculantur puellæ labiosæ, quam quæ sunt brevibus labris. Horace appears to have had the entire passage in his eye when composing the following lines :

Illuc prævertamur, amatorem quod amicæ
Turpia decipiunt cæcum vitia aut etiam ipsa hæc
Delectant ; veluti Balbinum polypus Hagnæ.
Vellem in amicitiâ sic erraremus, et isti
Errori nomen virtus posuisset honestum.
At, pater ut gnati, sic nos debemus, amici
Sed quod sit vitium, non fastidire. Strabonem
Appellat pætum pater ; et pullum, male parvus
Si cui filius est, ut abortivus fuit olim
Sisyphus : hunc Varum, distortis cruribus ; illum
Balbutit Scaurum, pravis fultum male talis.
Parcius hic vivit ; frugi dicatur. Ineptus
Et jactantior hic paulo est ; concinnus amicis
Postulat ut videatur. At est truculentior, atque
Plus æquo liber ; simplex, fortisque habeatur.

But countless such conceits, and to narrate
Idle: yet grant the frame ador'd possest
Of face divine, that all the power of love
Plays o'er each limb symphoneous, others still
Exist of equal beauty, still ourselves
Once liv'd without her, and full well we know
She, too, each art essays the baser need;
And so with scents bedaubs her that her maids
Far fly opprest, and vent their smother'd laugh.
Then, too, the wretched lover oft abroad
Bars she, who at her gate loud weeping stands,

Caldior est; acres inter numeretur. Opinor,
Hæc res et jungit, junctos et servat amicos.
Sat. I. iii. 38.

And yet a shorter method we may find,
As lovers to their fair one fondly blind,
E'en on her foulness can delighted gaze:
For Hagne's wen can good Balbinus please.
O! were our weakness to our friends the same,
And stamp'd by virtue with some honour'd name.
Nor should we to their faults be more severe
Than an indulgent father to his heir.
If with distorted eyes the urchin glares,
"O! the dear boy—how prettily he stares!"
Is he of dwarfish, and abortive size?
"Sweet little moppet!" the fond father cries.
Or is th' unshapen cub deform'd and lame?
He kindly lisps him o'er some tender name.
Thus, if your friend's too frugally severe,
Let him a *wise economist* appear.
Is he, perhaps, impertinent and vain?
"The pleasant creature means to entertain."
Is he too free to prate, or frankly rude?
"'Tis manly plainness all, and fortitude."
Is he too warm? "No: spirited and bold."
Thus shall we gain new friends, and keep the old.
Francis.

Ver. 1225. *And so with scents bedaubs her*——] In the original, thus: v. 1168.

Et miseram tetris se subfit odoribus ipsa:

In which we certainly find no mention made of white lead or vermillion: Marchetti, nevertheless, seems to conceive that they both lurk somewhere or other underneath this verse; or, at least, that it will bear to be so translated:

ed ella in oltre
Di *biacca* intride, e di *cinabro* il volto
Folle, e con tetri odor, &c.

The advice of Granville upon the same custom, which has not *altogether* left us in modern days, may be here pertinently adduced:

Cloris this costly way to stink give o'er;
'Tis throwing sweets into a common shore;
Not all Arabia would sufficient be:
Thou smell'st not of thy sweets—they stink of thee.

Not in the same manner, however, the licentious, but more delicate bard of Shiraz:

باب ورنگ وخال وخط چه حاجت
روي زيبارا

Why should the fair, the lovely face assume
Patches, or paints, false ringlets or perfume?

Unguit amaracino, et foribus miser oscula figit.
Quem si, jam inmissum, veniens obfenderit aura
Una modo, caussas abeundi quærat honestas;
Et meditata diu cadat, alte sumpta, querela:
Stultitiâque ibi se damnet, tribuisse quod illi
Plus videat, quam mortali concedere par est.
Nec Veneres nostras hoc fallit; quo magis ipsæ
Omnia summo opere hos vitæ postscenia celant,
Quos retinere volunt, adscriptosque esse in amore;
Nequidquam: quoniam tu animo tamen omnia posses
Protrahere in lucem, atque omneis inquirere risus:

Ver. 1233. *So deep offends him, he some motive seeks Instant to quit her;——*] Not foreign from the subject is the following distich of Theocritus:

Χειλεα τοι νοσιοντι, χερες δε τοι εντι μελαιναι·
Και κακον εξοσδεις. Απ' εμευ φογε, μη με μολυνης.
Idyl, B. 9.

Ver. 1239. *Behind the scenes of action——*] In the original, ver. 1179:

——vitæ postscenia celant.

In the different editions this verse has been variously written, and much perplexity has, in consequence, occurred to the expositors. Lambinus has the credit of having restored the true and genuine lection; and he has been generally followed by succeeding editors. The phrase, observes Creech, in his Latin notes, has obviously a metaphorical allusion to the theatre. *Postscenium* is a place *behind the scenes*, where many things are transacted not intended to be beheld by the spectators. By this expression, therefore, Lucretius means, all those concerns in which ladies of pleasure are engaged at home when alone, and which they are studious to conceal from their lovers. "The ancient theatre," as Ruæus has observed, "was a semicircular building, appropriated to the exhibition of plays, the name being derived from θεαομαι, to behold. It was divided into the following parts: 1. The *porticus*, *scalæ*, *sedilia*; the rows of *sedilia*, or seats, were called cunei, because they were formed like wedges, growing narrower as they came nearer the centre of the theatre; and these were all disposed about its circumference. 2. The *orchestra*, so called from ορχεισθαι, to dance: it was the inner part, or centre of the theatre, and the lowest of all, and hollow, whence the whole open space of the theatre was called *cavea*. Here sat the senators, and here were the dancers and music. 3. The *proscenium*, which was a place drawn from one horn of the theatre to the other, between the orchestra, and the

Kissing the walls that clasp her; with perfumes
Bathing the splendid portals, and around
Scattering rich wreaths, and odoriferous flowers.
Yet when at length admitted, the first breath
So deep offends him, he some motive seeks
Instant to quit her; his long labour'd speech
Of suff'rings drops, and owns himself a fool
That for one moment he could deem her crown'd
With charms the race of mortals ne'er can boast.
This know full well our Cyprian nymphs, and deep,
Behind the scenes of action each defect
Strive they to hide from him they fain would sway.
But vain th' attempt; for oft the mind will guess
The latent blemish, and the laugh unfold.

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scene, being higher than the former, and lower than the latter: here the comic and tragic actors spoke and performed upon an elevated platform, which was called the *pulpitum* or stage. 4. *The scene*, which was the opposite part to the audience, decorated with pictures and columns, and originally with trees, to shade the actors, when they performed in the open air. 5. The *postscenium*, or part behind the scenes. Among the Romans, the amphitheatre of Titus, now denominated Colosseo, was the most magnificent edifice of the kind, which the luxury of this opulent republic could ever boast of. A considerable portion of it has escaped the ravages both of time and barbarians, and is still in existence."

Ver. 1240. *Strive they to hide——*] In this they may often have succeeded; but if we place any dependance upon Horace or Martial, they were not always thus fortunate: the latter complains as follows, probably of an old mistress, and certainly not in terms of the greatest gallantry:

Tam male Thais olet quam non fullonis avari
Testa vetus, mediâ, sed modo fracta, viâ.
Epig. vi. 93.

And if the reader be desirous of knowing what is meant by the *fullonis testa vetus*, or *stale brine of the fuller's vase*, he may turn to the beginning of the Note on v. 1046. of the present Book.

Ver. 1242. *——and the laugh unfold.*] Lambinus has not been so fortunate in the use of his pen here as in a former instance. For *risus*, "laughter," the uniform reading of all the genuine codices, he has inserted *nisus*, "efforts:" and been followed by all the copies of a later date, excepting Mr. Wakefield's, which, with a becoming spirit, restores the original reading. The "laugh" referred to is obviously that of the domestics, mentioned in v. 1226,

Et, si bello animo est et non odiosa vicissim,
Prætermittêre humanis concedere rebus.
Nec mulier semper ficto subspirat amore ;
Quæ conplexa viri corpus cum corpore jungit,
Et tenet adsuctis humectans oscula labris.
Nam facit ex animo sæpe ; et, communia quærens
Gaudia, solicitat spatium decurrere amoris.
Nec ratione alià volucres, armenta, feræque,
Et pecudes, et equæ, maribus subsidere possent,
Si non, ipsa quod illorum subat, ardet abundans
Natura, et venerem salientum læta retractant.
Nonne vides, Memmi! quos mutua sæpe voluptas
Vinxit, ut in vinclis conmunibus excrucientur ?
In triviis quom sæpe canes, discedere aventes,
Divorsei, cupide summis ex viribus tendunt ;

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who cannot refrain from this kind of merriment, while beholding their mistress's vanity: the approaching lover accidentally detects their ebullitions of mirth, and easily surmises the cause.

Ver. 1248. *And print their humid kisses on their lips.*] In like manner, Tibullus:

Et dare anhelatim pugnantibus *humida* labris,
Oscula, et in collo figere dente notas. I. 8. 37.

Those who are fond of such kind of empassioned descriptions, may sufficiently gratify themselves by a general perusal of the elegies of this tender and pathetic poet: to which, if they desire more luscious delineations still, they may consult Catullus and Ovid, among the ancients, and Cornelius Gallus, Joannes Secundus, and Flaminio, among the moderns. From Gallus, I shall take the liberty of copying a few verses before I close this Note; not only because they are quite in point, and exquisite in themselves, but because they are generally conceived to have laid the foundation for that unrivalled song of Fletcher, "Take, O take those Lips away." They occur in his Lydia.

Pande, puella, geneas roseas
Perfusas rubro purpureæ Tyricæ :
Porrige labra, labra corallina ;

Whence those of soul ingenuous frankly own,
Frequent, those faults which none can all escape.
Yet not for ever do the softer sex
Feign joys they feel not, as with close embrace,
Frame prest to frame, their paramours they clasp,
And print their humid kisses on their lips.
Oft from their hearts engage they, urg'd amain
By mutual hopes to run the race of love.
Thus nature prompts; by mutual hopes alone,
By bliss assur'd, birds, beasts, and grazing herds,
The task essay; nor would the female else
E'er bear the burden of the vig'rous male;
By mutual joys propell'd. Hast thou not seen,
Hence tempted, how in mutual bonds they strive
Work'd oft to madness? how the race canine
Stain with their vagrant loves the public streets,
Diversely dragging, and the chain obscene

Da columbatim mitia basia
Sugis amentis partem animi.

Thus energetically interpreted by the translator of Secundus:

Let a warmer crimson streak
The velvet of thy downy cheek:
Let thy lips that breathe perfume,
Deeper purple now assume;
Give me now one *humid kiss*,
Now repeat the melting bliss;
Soft, my Love!—my Angel, stay!
Soft! you suck my breath away.

Ver. 1252. *By bliss assur'd, birds, beasts, and grazing herds,*
The task essay;] Thus Milton:

But if the sense of touch, whereby mankind
Is propagated, seem such dear delight
Beyond all other, think the same vouchsafed
To cattle and each beast; which would not be
To them made common and divulged, if aught
Therein enjoyed were worthy to subdue
The soul of man, or passion in him move.
Par. Lost, viii. 578.

Quom interea validis Veneris conpagibus hærent?
Quod facerent numquam, nisi mutua gaudia nossent;

Ver. 1263. *Whence o'er and o'er the bliss must mutual prove.*] The poet is here taking his leave of the momentary gratifications and inevitable ruin of the libertine; and is advancing to the more important subject of animal generation, which he openly commences in the verse immediately subsequent to the present. It would, however, be an injustice to the memory of Lucretius, if I were to quit the former topic altogether, without inserting an admirable note from Faber upon its intention, and the manner in which the poet has executed it, page 414. In toto Latio quantum quantum est, nihil ut opinor, quidquam legas, quod æque legi oporteat, atque eos versus. Sed tamen reperti olim fuere nonnulli, hodieque reperiuntur ejus generis bene multi, qui illos ab oculis hominum, si fieri queat, removendos esse contendant, quasi insigni quadam turpidine scateant. Miserum itaque poetam nostrum, cujus tam frugiferum tamque salutare consilium, adeo improsperos eventus habeat. Quamvis enim totis exclamet faucibus:

Sirenas hilarem navigantium pænam,
Blandasque mortes, gaudiumque crudele,
Effugite, ô miseri! totumque ab littore funem
Rumpite.

Quamvis tot argumentis probarit, certissimam homini pestem ab re venerea esse, atque adeo cune pejus et angue vitari oportere nugivendulas istas mulierculas, quæ suos amatores effrænatos duetitant: quamvis rem, famam, sanam mentis corporisque valetudinem, ea via defluere ostenderit; tamen id ubi præstitit, ibi tum viri boni, "Heus inquiunt (et quam longe quidem) fuge turpia, obscæna dicta, *spurcidicos*, *immemorabiles versus*, amationes, &c." Sed, ô boni, si boni estis, nihil hic spurcidicum, nihil immemorabile: si quid tale videbitur, id vitio legentis, non poetæ adscribendum erit. Hoc certe videor affirmare posse, si quæ à Lucretio hic scribuntur ea pro fœdis et flagitiosis dictis habebuntur, longe illis turpiora, longeque fœdiora reperiri in eo libro posse, quem nemo sine præsenti famæ periculo reprehendat.—Sed Lucretius quo fine scripserat? an ut leoninas operas præberet, et ex pessimo omnium mercimoniæ rem faceret auctiorem? Hoc quidem multis temporibus alii poetæ fecere quibus profuit, et nunc fortasse nonnullis prodest. Sed vitæ integritas, gravitasque morum, ac tot saluberrima præcepta hic illic per totum opus sparsa, hujusmodi suspicionem longe à Lucretio amoliuntur. Paucis dicendum; vir scire quod ipsi consilium fuerit? En tibi:

Sed fugitare decet simulaera et pabula amoris
Absterrere sibi, atque alio convertere mentem;
Nam certa et pura est sanis magis inde voluptas
Quam miseris: etenim potiundi tempore in ipso
Fluctuat incertis erroribus ardor amantum;
Nec reperire malum id possunt quæ machina vineat.
Usque adeo incerti tabescunt vulnere cæco.
Adde quod absumunt vires, pereuntque labore,
Adde quod alterius sub nutu degitur ætas.
Labitur, interea, res, et vadimonia fiunt;
Languent officia, atque ægrotat fama vacillans.
Si neseis, etiam medio de fonte leporum
Surgit amari aliquid, quod in ipsis floribus angat.
Aut quod conscius ipse animus se forte remordet,
Desidiose agere ætatem, lustrisque perire;
Aut quod in ambiguo verbum jaculata reliquit;
Quod cupide affixum cordi vivescit ut ignis;
Unde fit ut melius *multo* vigilare sit ante,
Quâ docui ratione, cavereque ne inlaqueari.

Ain' tu, lector, qui ita loquantur, eos *hortatores scelerum* vocemus, an *dehortatores* simul facundissimos, simul acerrimos?

"Through the whole extent of the Latin language, be such extent what it may, there is nothing, I am persuaded, that can claim a right to be read so much as these verses. Yet in former times many persons are to be found, and not a few even in the present day, who contend that they ought, if indeed it were possible so to do, to be locked up from the sight of mankind, as though they overflowed with some notorious indecency. Truly unfortunate, therefore, is our poet, whose advice, at once so profitable

Tugging to loose, while yet each effort fails?
Toils they would ne'er essay if unassur'd

and salutary, has at length acquired so luckless an issue. Although he exclaims with full voice,

Fly, wretches, fly!—o'er yonder coast the trains
Of treacherous Sirens spread their rapturous pains,
Their dulcet deaths, their joys that stab the heart;
Haste, cut your cables instant, and depart.—

"Although he has proved, in a variety of express arguments, that debauchery is a most dreadful pest to mankind; and that the snares of libidinous love, and the faithless females who attempt to spread them, ought rather to be avoided than a mad dog or a viper: although he has demonstrated that property, character, health of body and mind, are alike melted away in the abominable pursuit; yet here, where he chiefly excels, even in this very place, these rigid worthies vociferate—and long do they often protract their vociferation,—Ah! fly these indecencies, these obscene precepts, these ribaldries, these verses, too infamous to be noticed, these love-intrigues, &c. But, worthy sirs, if indeed ye deserve such appellation, here are no ribaldries, no verses too infamous to be noticed: and if any thing of the kind should appear, it is the fault of the reader, and not of the poet. This, at least, I may venture to affirm, that if the precepts Lucretius has here written be to be accounted indecent and libidinous, they fall far short of the obscenity and indecency that may be found in a certain book which no one dares censure without endangering his reputation. But, in truth, what was the object Lucretius had in view? Was it to encourage debauchery, and to acquire a pecuniary profit by this most detestable of all traffics? Such may have been the object of particular poets in many ages; they may have profited by their unclean labours; and some perhaps do so still: but integrity of life, gravity of manners, and the moral and wholesome precepts which are scattered occasionally throughout almost every page of the present work, should chace every suspicion of this kind far distant from Lucretius. In short, are you anxious to know the advice he gives? Read then as follows:

Yet fly such phantoms, from the food of love
Abstain, libidinous: to worthier themes
Turn, turn thy *soul; behold!* the pure of heart
Far surer pleasures, and of nobler kind
Reap, than the wretch of lewd and low desires,
Who, in the moment of enjoyment's self,
Still fluctuates with a thousand fears subdu'd;
Nor aught of antidote exists, so deep
Pines he, perplext, beneath the latent ill.
Then too his form consumes; the toils of love
Waste all his vigour, and his days roll on
In vilest bondage. Amply though endow'd,
His wealth decays, his debts with speed augment,
The post of duty never fills he more,
And all his sickening reputation dies.
Unsound is every hope; some bitter still
Wells forth perpetual from his fount of bliss,
And poisons every flowret. Keen remorse
Goads him perchance for dissipated time,
And months on months destroy'd; or from the fair
Haply some phrase of doubtful import darts,
That, like a living coal, his heart corrodes.
Hence, by the muse forewarned, with studious heed
Shun thou the toils that wait; for easier far
Those toils to shun, than when thy foot once slides
To break th' intangling meshes and be free.

"Reader! dost thou call those, who thus write, the abettors of debauchery, or its most eloquent and inveterate opponents?"

In illustrating our author's descriptions, I have had frequent occasions to notice the strong and striking similarity that prevails between his own images and manner, and those of the writer of the Sacred Proverbs. Solomon, like Lucretius, however, does not continue either his delineation or his moral in one connected series; they are purposely broken and interrupted for the admission of other subjects; they are then resumed, and a variety of additional touches are added. To give the parallelism its full effect, it is hence necessary to pursue the plan which Faber has so successfully pursued with respect to

Quæ jacere in fraudem possent, vinctosque tenere. 1200
Quâ re etiam atque etiam, ut dico, est conmunis voluptas.

Lucretius, in the above passage, and to unite the scattered fragments of Solomon into one homogeneous picture. In doing this the reader must excuse me from prefixing the original, as it would occupy too much space. I shall merely add a brief observation or two on the few passages in which the ensuing version may differ from the established text.

Chap. vii.

1 My Son! retain my sayings,
And treasure up my precepts within thee;
5 That they may preserve thee from the dissolute woman,
From the wanton who dissembleth her speech.
6 For through the window I looked,
Through the lattice of my house,
7 And I beheld among the infatuated,
I saw, among the youths, a young man void of understanding;
8 Who was passing through the street, near its corner,
And walking in the way to his house,
9 In the twilight, at the evening of the day,
On a night obscure and cloudy.
10 And, behold! a woman stood in his way,
Attired like a harlot, and deceitful of heart.
11 Vociferous is she, and impudent,
Her feet abide not at home;
12 Now in the streets, now in the squares,
Even at every corner she practiseth her wiles;
13 And she caught hold of him, and kissed him,
And hardened her face, and said unto him:
14 "I have secured myself by peace-offerings,
This day have I paid my vows:
15 Therefore came I forth into thy walks,
To search for thy appearance, and I have found thee.
16 I have decked my bed with wrought hangings,
With embroideries, and fine linen from Egypt;
17 My couch have I perfumed with myrrh,
With aloes, and cinnamon.
18 Come, let us intoxicate ourselves with love,
Till the morning let us be ravished with enjoyment.
19 Behold! my husband is not at home,
Far off is he travelling on a journey;
20 He hath taken his purse along with him,
And will return home at a fixt time."
21 By her entangling address she caused him to yield;
By the blandishment of her lips she compelled him:
22 Headlong he followeth her;
As the ox goeth towards the shambles,
Fast bound with cords, a terror even to the fool;
Till a dart strike through his liver:
23 Like the bird "that" hasteneth to its snare,
And knoweth not that its life is "concerned" in it.
24 Listen to me, therefore, O young men!
And ponder the words of my mouth:
25 Let not thy heart plunge into her paths,
Stray not within her boundaries;
26 For many, stricken by her, hath she fell'd.
Yea numerous are the valiant whom she hath slain:
27 Her house is the broad road to hell,
Leading down to the recesses of perdition.

Chap. vi.

25 Devour not her beauty in thy heart,
Let her not ensnare thee with her eyelids:
26 For by means of a prostitute "cometh" a morsel of bread;
And the adulteress will prey on inestimable life.
27 Can a man surround his bosom with fire,
And his cloaths not be burnt?
28 Can a man tread on live coals,
And his feet not be corroded?
29 Such is his "lot" who approacheth his neighbour's wife;
No one shall be innocent who toucheth her.
33 A wound and brand of infamy shall he receive,
And indelible shall be his reproach.
34 For vehement is the jealousy of a husband,
Neither will he relax in the day of punishment.
35 The face of no intercession will he behold,
Nor be appeased though thou multiply thy ransom.

Of mutual bliss, and cheated to the yoke.
Whence o'er and o'er the bliss must mutual prove.

Chap. v.

7 Listen to me, therefore, O young men!
And depart not from the words of my mouth.
8 Retread thy path far from her,
Approach not the door of her house:
9 Lest thou surrender thy dignity to strangers,
And thy years to a cruel "task-master:"
10 Lest aliens banquet on thy strength,
And on thy nerves in a foreign habitation.
11 And in thine extremity thou bitterly lament,
While thy flesh and thy bowels are consuming;
12 And exclaim, "How have I hated instruction!
And my heart has despised reproof!
13 How have I disobeyed the voice of my teachers!
And withdrawn my ear from those who expostulated with me!
14 From no evil scarcely have I refrained
In the midst of the congregation and the community."—
15 Drink waters out of thine own cistern,
Even running waters out of thine own well-spring;
16 Then shall thy streams flow abroad,
They shall be rivers of waters in the streets.
17 Thine, thine alone shall they be,
And no stranger shall claim them with thyself:
18 Blessed shall be thy fountain
And joyful the wife of thy youth;
18 As the lovely hind, and the graceful roe,
For ever shall her bosom ravish thee:
Thou shalt be intoxicated with the embraces of her love—
20 And why, my Son! wilt thou be intoxicated with a wanton?
And embrace the bosom of a stranger?
21 Behold! the ways of such a man are before the eyes of Jehovah;
And he pondereth all his footsteps.
22 His own iniquities shall entangle the wretch,
Even in the cords of his own sins shall he be ensnared.
23 He shall perish void of instruction,
And shall be crazed with the intensity of his folly.

In ch. vii. 5. of the standard version, אשה זרה is rendered "strange woman," and נכריה, "stranger:" the adjective, in the former expression, however, is derived from a root which signifies to "disperse, dissipate, or dissolve," and is hence more accurately, as well as more elegantly rendered "from the dissipated" or "dissolute," than "from the *strange* woman." The direct rendering of the latter expression is "an alien, foreigner, or stranger;" but as the term also means "a pretender, a dissembler, a counterfeit," one who pretends to an affection which does not exist, I have chosen the word wanton as more immediately expressive of its signification, in the present place, than any other.

Ver. 8. "Walking in the way to his house," is commonly rendered "to *her* house;" by which, half the sense and beauty of the context is destroyed. The incorrectness, however, is obvious: had he been "walking in the way to *her* house," enticement would have been unnecessary.

Ver. 22. "Fast bound with cords, a terror even to the fool." In the common version, which introduces a new figure, "as a fool to the correction of the stocks." But if the Hebrew term, עכס, could, with propriety, be interpreted *stocks*, the literal translation would then be, conversely, "as the stocks to the correction of the fool." עכס, however, does not mean *stocks*, but like its synonym in Arabic, عكس or عكاس a *chain* or *cord*, considered substantively; or the act of *chaining* or *tying* with cords, if employed as a verb. I have, therefore, with Schultens, continued the metaphor introduced into the former part of the verse, and applied it to the ox, which is hence represented as dragged by cords to the slaughter-house. The Septuagint, in unison with the Chaldaic, Syriac, and Arabic, gives και ὡσπερ κυων επι δεσμους, και ἱλαφος, τοξευματι πεπληγως; ου το ηπαρ; but with the present rendering of the term, עכס, there is no necessity for a deviation from the original text. Symmachus, with a nearer approach to the interpretation now contended for, translates the line, σκιρτων επι δεσμων ἀγρων.

Et conmiscendo quom semine forte virili
Femina vim vicit subitâ vi, conripuitque;

Ver. 25. It is well observed by Schultens, that the verb ישט is commonly appropriated to the action of a restive and violent horse, not under the command of his curb, and is hence much more emphatically rendered *plunge*, than, as in our common version, *decline*. נתיבת refers rather to an armed or fortified way than to a *path* or way generally; and hence the word *boundaries*, by which I have rendered it, best agrees with the ensuing verse.

Chap. vi. 27. See Note on v. 1179. of the present Book.

Chap. v. 9. The best commentary upon the passage extending from this verse to 14. is the parable of the repentant prodigal, Luke xv. 11. and it requires no farther illustration.

Ver. 21. "Behold! the ways of such a man, &c." In our common version, "*For* the ways, &c." I am indebted to Reiske for the first glance at this meaning of the Hebrew כי, which I have rendered in the same manner in ch. vii. 19. The term is of very extensive signification, and Noldius has given not less than three and thirty senses in which it is occasionally used, without, in the remotest degree, adverting to the present. It explains, however, better than any other, a variety of passages in the sacred Scriptures, and, in some, appears absolutely necessary. Thus, Job iii. 24. 25:

כי לפני לחמי אנחתי תבא
ויתכו כמים שאגתי:
כי פחד פחדתי ויאתיני
ואשר יגרתי יבא לי:

Behold! my sighing takes the place of my food,
And my lamentations burst forth as the billows:
Behold! the terror which I fear rushes upon me,
And that which I dread is "still" at hand.

It is hence obvious, that כי is sometimes of parallel meaning with הן, and many passages in Isaiah, as well as other parts of holy writ, might be rendered either more forcible or more perspicuous by such an interpretation. See, among others, Isaiah, ch. xxi. 6. 15, 16, 17.

Ver. 1264. *If, when the male his genial tide protrudes,*] We now commence a subject on which, notwithstanding all the new opinions that have been hazarded, and the very great advantages which have accrued to medical science in general, from our present improved knowledge of anatomy, little has been added to the common stock of information prevalent in the æra of Lucretius. On the contrary, we may contend, that although a complete cycle of theories has not altogether taken place, very little remains to make it perfect: the unfounded and indigested systems of intervening ages have progressively vanished away, and we seem this moment falling back to the very creed of Epicurus, as developed in the numbers of his harmonious disciple: a creed not largely differing indeed from that of Hippocrates, who preceded Epicurus by five centuries at the least.

Omitting an infinite variety of offsets and abortive systems which have been generated, and have existed for a short time, from this fertile subject, there are three that deserve our particular attention; that contended for by Lucretius, that the animal, or rather the human fetus, for we are now principally bending our attention to our own species, is the conjoint production of seminal matter afforded in coition by both sexes, which has been termed the theory of *epigenesis*; that which asserts that the female alone affords the basis of the embryon; and that which affirms it to be the total production of the male; both which latter have been denominated theories of *evolution*.

The second hypothesis in the present arrangement, or that contending for the production of the fetus from female rudiments alone, was originally advanced by Josephus de Aromatariis; but it was principally brought into notice by Swammerdam and Harvey. Observing, a vast cluster of vesicles in the female ovarium, an organ situated on each side of the uterus or womb, and in its immediate vicinity, though only mediately connected with it by means of the Fallopian tube and vasa deferentia; and perceiving that these vesicles appeared to diminish in number, in

If, when the male his genial tide protrudes,
The panting female deep her breath retract 1265

some kind of proportion to the number of parturitions a woman had sustained, they successively determined that these vesicles must be inert eggs, or ovula, containing in extreme embryo a perfect miniature of the form assumed afterwards, which, by the pleasurable shock sustained throughout the whole body in the immediate act of coition, but more directly by themselves from proximity of situation, are instantaneously thrown into a state of vital activity, are detached from the common cluster of which they constitute a part, and in a short time pass into the uterus, through the canal of the Fallopian tube, which spontaneously enlarges for the purpose; where, by the genial power of the uterus itself, the incipient embryon is gradually evolved and augmented into a perfect fetus, and partakes of the common form and properties of the parent stock. The little animal, it was maintained by Harvey, might be occasionally impressed with an organic resemblance to the father, from the electric impulsion communicated in copulation to every portion of the fluids and solids of the body, and of consequence to the essential humour of the ova themselves: but, reasoning from the length of the vagina in cows, and many other animals, and his own occasional dissections of the human subject shortly after coition, he contended that the emitted fluid of the male never could enter the uterus, and of course could not mechanically assist in the evolution of the contained embryon.

Leewenhoek and Hartsoeher, however, upon a more accurate anatomy of the uterus immediately after copulation, discovered, not only that the projected male fluid could enter into its cavity, but that it actually did thus enter, and in some instances, which fell beneath their notice, had obviously ascended into the Fallopian tubes. And now a new doctrine was started, and one altogether opposite to the theory of Harvey. Upon the principle of the former, the father had no immediate connexion with his own child; he could not bestow upon it a particle of his corporeal frame, and the entire production was the operation of the mother. In consequence then, of this discovery, we were instructed, that the whole creation was the property of the father, and that the mother, in her turn, had nothing to do with it; that every particle of the projected fluid was a true and perfect semen, containing in itself, like the ovum of the female upon the theory of Harvey, the miniature of all the organs and members of the future fetus, which in due time were gradually evolved and augmented; and that the uterus and ovum, into which some one of these semina was almost sure of being protruded in the act of coition, conjointly offered nothing more than a mere nest, in which the homunculus, or rudimental fetus, was deposited for warmth and nutriment. And as the former theory appealed to the phænomena of oviparous animals during the period of incubation, the phænomena of worms and porwigles were appealed to by the latter: and a very considerable degree of life and motion were supposed to be incontrovertibly discovered by the aid of good magnifying glasses in the seminal fluid itself, and not less than many millions of these homunculi, or little unborn men, frisking about in the diameter of the smallest grain of sand, and all of them of the exact shape of a tadpole. But Delappius, a pupil of Leewenhoek, advanced farther; for he not only saw these tadpoles, but traced one of them bursting through its tunic, and exhibiting two arms, two legs, the human head and heart. Imagination, we see, is not confined to poetry: it often extends as largely to the profoundest branches of science; and the investigator of philosophical systems meets with his occasional pleasantries, as well as the hunter after historical anecdotes. It is truly astonishing, however, to reflect on the universality with which this latter opinion has, till within a very few years, been accredited: and how decisively every anatomist, and indeed every man who pretended to the smallest portion of medical science, was convinced that his children were no more related, in point of actual generation, to his own wife, than they were to his neighbour's! It was in vain that Verheyen denied the existence of animalcules in the seminal fluid, and demonstrated, that the motion supposed to be traced

Tum similes matrum materno semine fiunt:
Ut patribus patrio: sed, quos utriusque figuræ
Esse vides juxtim, miscenteis volta parentum,
Corpore de patrio ac materno sanguine crescunt,
Semina quom, Veneris stimulis excita per artus,
Obvia conflixit conspirans mutuus ardor;

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there, was a mere microscopic delusion: it was in vain, that the impossibility was urged of the descent of a pulpy and vesicular ovulum, through the almost imperceptible canal of the Fallopian tube, with which, in reality, it is never immediately connected; it was in vain to adduce the existence of an equal quantity of maternal and paternal features in almost every family in the world, the undeviating intermixture of features in mules, and other hybrid animals, and the casual transfer of maternal impressions to the child when suddenly frightened during the earlier periods of gestation. The system of generation *ab animalculo maris* was still triumphantly maintained, and the feeble exertions of the few, who had sense enough to oppose it, were drowned in the multitudinous vociferation of their opponents.

At last, arose the accurate and indefatigable Buffon, and, undecoyed by opinion, as well as undismayed by clamour, he resolved to deviate from the beaten path of absurdity, to think for himself, and to publish his thoughts to the world.

And what do they at last amount to? If I be not much mistaken, a resuscitation of the very theory of Epicurus, illustrated and explained from modern science, and the experience of additional ages. All animals and vegetables, according to the ingenious theory of this admirable naturalist, contain an infinite number of organic molecules in every part of their frames: but in the sexual fluid, and the seed-vessels of plants, they are more numerous than in any other parts. These organic elements afford nutrition and growth to the animal and vegetable system: and when both become adult, the surplus is secreted and strained off for the formation of their respective seeds. The existence of vesicular ova detached at distinct periods of time from the female ovarium is, upon this hypothesis, a mere chimæra, and their passage through the Fallopian tube into the uterus is declared to be totally unfounded on any proof whatsoever, and a mere assumption for the purpose of systematizing. The ovaria are, in reality, testes, receiving, like those of the male, the surplus of the organic molecules of the body, and secreting them for the purpose of generation. The seminal liquor thus secerned in the male and female frames, are, in the act of coition, protruded at the same time into the uterus, and becoming intimately blended together, produce, by a kind of new fermentation, the first filaments of the fetus, which grow and expand like the filaments of plants: for nature, it appears, commences all her operations by a similar kind of motion; and the fetus in its state of incipient existence, possesses nothing more than this. To render such combination of seminal fluids productive, it is contended, that their quantities must be duly proportioned, their powers of action definite, and their solidity, tenacity, or rarefaction, symphoncous and accordant: and that the fetus is either male or female, as the seminal fluid of the man or woman abounds most with organic molecules, and resembles the father or mother according to the different combinations of these elements. Hist. Naturelle, vol. iii.

This ingenious theory has since been strenuously supported by Maupertuis, in his Venus Physique,

Transported most, the race produc'd will, then,
From female stores prove female, if revers'd,
From stores paternal, male. But when the form
Blends both its parents' features it ascends
From equal powers of each; the warm embrace
Rousing alike, through each conflicting frame,
The seeds of latent life in scale so nice

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and Needham, in an admirable paper inserted in the Philosophical Transactions, vol. xiv. In each of these last publications, indeed, we find some degree of change, and, for the most part, some degree of improvement; but the variations are neither numerous nor very essential. Haller and Bonnet have endeavoured to revive the theory of female generative power alone, as first established by Harvey; or rather to erect an edifice somewhat similar to it from the crumbling ruins of the ancient building; and they have appealed to the phænomena of the vegetable creation with considerable research, and some degree of success: but this system, nevertheless, never has been very generally followed; and is now almost relinquished, even in Germany.

The system of Darwin differs but little from that of Buffon, and obviously took its rise from the latter; of course it does not vary considerably from the theory of Lucretius. We here meet with secreted and superabundant germs, which are not only organic, but positively declared to be vital; and this, whether they be secreted in a vegetable or in an animal frame, for the systems of Buffon and Darwin extend to each alike; but by vitality, the latter informs us, he intends "some degree of organization, or other properties not existing in inanimate matter:" so that they seem precisely to correspond with the organic germs or molecules of the former. The term molecule, however, in the language of Darwin, is only applied to the female department: the germs or particles secreted by the feminine organs of a bud or a flower, or the feminine organs of an animal, are denominated *molecules* with formative propensities: while those secreted from the masculine organs of either department are entitled *fibrils* with formative appetencies. To establish the propriety of such a distinction, he conceives that the latter possess a greater degree of organization than the former: but this, even upon his own system, is total conjecture, nor is any one fact adverted to for the support of such a belief. Both, however, we are told, have an appetency or propension to form or create, and "they reciprocally stimulate and embrace each other, and instantly coalesce; and may thus popularly be compared, observes the ingenious theorist, to the double affinities of chemistry." The fetus, whether vegetable or animal, whether oviparous or viviparous, is the consequence of this formative effort on both sides. Phytologia, part i. sect. 7. Professor Blumenbach of Gottingen, has also of late brought forwards a theory, as I have remarked in another place, (see Note on Book V. 436.) not essentially different from this of Dr. Darwin: he supposes every particle of unorganized matter to be endued with a creative or formative power, and every particle of organized matter with a creative or formative effort, (*Bildungstrieb,*) a principle similar in many respects to that of gravitation. From the first he traces the rude origin of the world and the mineral kingdom; from the last, the rise of vegetables and animals.

Ver. 1273. *That neither conquers, nor to conquest yields.*] On this occasion we cannot but be reminded of the celebrated epigram of Martial:

Et neque utrum superavit eorum, nec superatum est.
Fit quoque, ut interdum similes exsistere avorum
Possint, et referant proavorum sæpe figuras;
Propterea, quia multa modis primordia multis
Mixta suo celant in corpore sæpe parentes,
Quæ patribus patres tradunt a stirpe profecta.
Inde Venus variâ producit sorte figuras;
Majorumque refert voltus, vocesque, comasque:
Quandoquidem nihilo minus hæc de semine certo
Fiunt, quam facies, et corpora, membraque, nobis.
Et muliebre oritur patrio de semine seclum;
Maternoque mares exsistunt corpore cretei.
Semper enim partus duplici de semine constat:

Dum dubitat natura gravis puerum faceretne puellam
Factus es, O pulcher, pene puella, puer.

While nature doubts a boy or girl to rear,
Fair as a girl, O boy! thy limbs appear.

Ver. 1287. *For both must join, or nought can e'er ensue.*] Polignac, following the extravagant system of male evolution, denominates this doctrive of our poet's, insane and idle. But whether his own creed be not better entitled to such epithets, I shall leave the reader to determine from this creed, as delivered in his own words; premising only, that, upon the cardinal's theory, the female, as I have already observed, has no concern whatsoever in the act of creating her own children,—the matrix affording nothing more than a mere nidus for the gradual growth of the embryo:

Sic hominum genus omne hominis tenuissima primi
Pars fuit. At majora tibi miracula pando.
Non solum exortos homines olimve futuros
In patre quemque suo stirpis comprenderat auctor,
Sed plures multo, qui nunquam ad luminis auras
Pervenient, quanquam ad lucem vitamque parati.
Quotquod enim a genitis gigni potuere vicissim,
Qui tamen in tenebris jacuere perennibus, et quos
Oppressit nox atra æterno in carcere clausos
Et, si dante deo, spirassent, quotquot ab illis
Enasci poterant, cunctos simul una creavit
Formavitque dies, jam membris omnibus aptos,
Jam plenos vegetante animâ sed menti egentes.

Anti-Lucr. vii. 1006.

That neither conquers, nor to conquest yields.
Oft view we, too, the living lines pourtray'd
Of ancestors remote; for various seeds,
Commingled various, through the parent frame
Lurk, which from race to race preserve entire
The form, the features of th' anterior stock.
Diversely such the power creative blends;
Whence oft the voice revives, the hair, the hue,
The full complexion of the race deceas'd:
For these as sure from seeds defin'd ascend
As e'en the face, the body, or the limbs.
Then, too, though male the fetus, female stores
Aid the production; while, if female form'd,
The tide paternal mixes in the make;
For both must join, or nought can e'er ensue.

So from one small speck of the first man sprang
Man's total race. But marvels stranger still
Now ope we: for not merely those that are,
Have been, or shall be, in the first great sire
Embedded lay, but all who ne'er shall live
Though for the light prepar'd: those vaster crowds
That long have sunk abortive to the tomb,
In endless night enchain'd—all that from these,
Had God vouchsaf'd them being, could' have sprang;
The whole together one same day produc'd,
With limbs, with soul endow'd, but void of mind.

In like manner, he explains the origin of vegetables:

Cum vero plantæ, ut dictis ostendimus, omnes
Secum innata sui generis primordia semper
Possideant, et nil, quod non habet, hoc dare possit;

Omnino ratione pari primordia prolem
Ipsa suam servant; et sicut semina plantæ
Fundunt ex se ipsis, ita dant quoque semina plantas.
Nec folia in ramis, fructusque ex floribus essent,
Ni proprio descripta forent in semine dudum
Principia, effigies rerum, gentisque futuræ.
vii. 1543.

For as all plants within themselves possess
Their own fixt elements, nor e'er can give
Aught that they hold not—elements alike,
By the same law, preserve the sentient tribes.
As plants, too, yield their seeds, so seeds their plants:
Nor leaves from shoots, nor fruits from flowers could spring,
Liv'd not in seeds such elemental germs,
The types of things, of ages yet unborn.

Atque, utri simile est magis id, quodquomque creatur,
Ejus habet plus parte æquâ, quod cernere possis,
Sive virûm suboles, sive est muliebris origo.

Nec divina satum genitalem numina quoiquam
Absterrent, pater a gnatis ne dulcibus umquam
Adpelletur, et ut sterili Venere exigat ævom;
Quod plerumque putant, et multo sanguine mœstei
Conspargunt aras; adolentque altaria donis,

Ver. 1288. ——*where the semblance more*
Inclines to either,——] This union of the features of the father and mother in the offspring produced, is a stumbling block in the systems both of male and female evolution, that no ingenuity of the most sophistical adherents to either has been able to explain satisfactorily. The mule, exhibiting in its own person, about an equal intermixture of the male ass and the mare, affords, perhaps, the strongest demonstration of the fallacy of these twin theories; and it is to this phænomenon that the attention of their supporters has been principally directed. but with little success, indeed, as the reader may perceive, if he chuse to take the trouble of consulting the Anti-Lucretius, Book VII. v. 1147. and following.

Ver. 1289. ——*the prevailing sex*
Chief lent the seeds of life,——] A dogma perfectly consonant with the system of Buffon, into which it was perhaps imported from the hypothesis before us. See Note on v. 1264. Aristotle, as we learn from Lactantius, was of an opinion nearly similar; but the latter, in describing his own adherence to this tenet of the Greek philosophers, absurdly and ludicrously adds, that the right part of the uterus is peculiarly appropriated to the male fetus, and the left to the female: a belief which is still prevalent, among the vulgar, in many parts of this kingdom. Lactantius, moreover, adjoins, in consequence of this position, that if the male semen should, by mistake, enter the left side of the uterus, a male child may still be conceived; but in as much as it occupies the female department, its voice, its face, and its general complexion will be effeminate. In like manner, if the female semen flow into the right side of the uterus, and a female fetus be begotten, the female will exhibit many symptoms of a masculine disposition, and be inordinately vigorous and muscular. De Opificio Dei, ch. xii. The system of Lucretius is not chargeable with this nonsensical puerility; it accounts for the varieties of sex and features upon more plausible and philosophic principles. And yet it is not improbable that Lactantius might have deduced the first rudiments of his belief from Hippocrates, who undoubtedly was attached to what I have here denominated the Epicurean system of conjoint seminal emission; and who probably laid its foundation-stone. But one species of seminal fluid alone, in either of the sexes, did not satisfy Hippocrates: he contended for two in each, a weak and a strong; and very ungallantly asserted, that as the male fetus was created from an intermixture of the robust fluid of either sex, so the fe-

But obvious this, that where the semblance more
Inclines to either, the prevailing sex
Chief lent the seeds of life, and rear'd complete
The virgin embryo, or incipient man.
Nor ever interfere the gods above
In scenes like these, the genial soil lock up,
Or curse with barren love the man unblest,
No lovely race who boasts to hail him sire,—
As deem the many, who, in sadness drown'd,
Oft offer victims, and, with fragrant gums,

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male was the production of the imbecile humours of the copulating parents.

Ver. 1292. *Nor ever interfere the gods above*
In scenes like these, the genial soil lock up,] The general opinion of the present day attributes, as it ought to do, the evil here complained of, to physical causes rather than to any immediate interposition of Providence. In what those physical causes may consist, where no organic defect can be traced, it may be difficult to determine; and different naturalists and physicians will decide differently, according to the system of generation to which they are attached. But will any of them adduce a more probable theory of obstructions than that the poet is now about to enter upon, and in which he has been followed by Buffon, Malpighi, and several other anatomic philosophers?

Among the Greek and Roman multitude, however, in the æra in which our poet wrote, the enlightened opinion of the present day, and for which he strenuously contends, did not prevail; and the bane of barrenness was attributed to the immediate curse of Heaven. This, indeed, was the belief, not only of the Greeks and Romans, but of almost all the Oriental nations, and continues to be so to the present moment, excepting, perhaps, among the priests of the Birmans, who adhere to the sacred system of Buddha, and cultivate celibacy with as much pertinacity as the monastic orders of the Church of Rome. That the present was the popular opinion among the Greeks, we learn from the following passage of Homer:

στυγερας δ' επεκεκλετ' Ερινυς,
Μηποτε γουνασιν ὁισιν εφεσσεσθαι φιλον υἱον
Εξ ερεθεν γεγαατα Θεοι δ' ετελειον επαρας,
Σευς τε καταχθονιος, και επαινη Περσεφονεια.

Il. I. 453.

My sire with curses loads my hated head,
And cries, "Ye furies! barren be his bed."
Infernal Jove, the vengeful fiends below,
And ruthless Proserpine, confirm'd his vow.

Pope.

Ver. 1295. *No lovely race who boasts to hail him sire,*] Thus, Homer, in verses that have been already quoted in Note on Book III. v. 926. but which are too apposite to be omitted in this place:

Ουδε τι μιν παιδες ποτι γουνασι παπταζουσιν
Ελθοντ' εκ πολεμοιο, και αινης δηιοτητος:

Il. I. 488.

From scenes of death when late he shall retire,
No infant on his knees shall call him sire. Pope

Ut gravidas reddant uxores semine largo.
Nequidquam divôm numen, sorteisque, fatigant:
Nam steriles nimium crasso sunt semine partim,
Et liquïdo præter justum, tenuique vicissim.
Tenue, locis quia non potis est adfigere adhæsum,
Liquitur ex templo, et revocatum cedit abortu.
Crassius heic porro, quoniam concretius æquo
Mittitur, aut non tam prolixo provolat ictu,
Aut penetrare locos æque nequit, aut penetratum
Ægre admiscetur muliebri semine semen:
Nam multum harmoniæ Veneris differre videntur;
Atque alias aliei conplent magis, ex aliisque
Subscipiunt aliæ pondus magis, inque gravescunt:
Quom multæ steriles Hymenæis ante fuerunt
Pluribus, et nactæ post sunt tamen, unde puellos
Subscipere, et partu possent ditescere dulci;
Et, quibus ante domi fecundæ sæpe nequissent
Uxores parere, inventa est illis quoque conpar
Natura, ut possent gnatis munire senectam.

Ver. 1315. *And feel the lovely load their wombs enrich.*] Thus beautifully in the original:

Subscipiunt aliæ pondus magis, inque gravescunt.
Ver. 1243.

And thus Virgil, as Wakefield observes, with similar imagery:

Nec minus interea *fetu* nemus omne *gravescit*.
Georg. ii. 429.
Nor less each grove is *loaded* with *increase*.

Kindle the blazing altar, wearying heaven
Vainly, to fill the void, reluctant womb.
For blank sterility from seeds ascends
Too gross, or too attenuate; if the last,
Ne'er to the regions that generic spread
Cleave they, rejected instant as propell'd.
But if too gross the genial atoms, dull
Move they, and spiritless, or never urg'd
With force sufficient, or of pow'r devoid
The puny ducts to pierce, or, pierc'd, to blend
Harmonious with the vital fluid found.
For love harmonious, whence increase alone
Can spring, oft differs largely; easier far
Some filling some, and others easier fill'd
And gravid made by others: whence, at times,
Those, many a Hymen who have erst essay'd
Vainly, at length th' appropriate stores acquire,
And feel the lovely load their wombs enrich.
While he, perchance, whose prior bans forbade
All the fond hope of offspring, happier now
A mate has found of more concordant powers,
And boasts a race to prop his crumbling age.

Ver. 1319. *And boasts a race to prop his crumbling age.*] To the same effect, Leonidas Tarentinus:

Παιδων τις μησαιτο, και ιδνωσαιτο γυναικα·
Ει και μιν δαχνη δυσβιοτος πιπη,
Σαην στυλωσαιτο· κακον δ' αστυλος ιδισθαι Οικος.

Usque adeo magni refert, ut semina possint
Seminibus conmisceri genitaliter apta,
Crassaque conveniant liquidis, et liquida crassis.
Atque in eo refert, quo victu vita colatur:
Namque aliis rebus concrescunt semina membris,
Atque aliis extenuantur, tabentque, vicissim.
Et quibus ipsa modis tractetur blanda voluptas,
Id quoque permagni refert; nam more ferarum,

Ver. 1320. *So much imports it that the seeds of life*] The corollary here deduced is admitted, to it fullest extent, into the theories of Buffon and Needham. It is explained and established by similar premises, and almost in the very words of the Roman bard. See Note on v. 1264.

Ver. 1323. *And man with woman duly pair'd unite.*] Thus, Thomson:

——for nought but love
Can answer love, and render bliss secure.
Spring, 1121.

Ver. 1324. *Much, too, concerns it what the foods employ'd;*] The truth of this axiom is, I believe, admitted by every physician and naturalist of the present day. In a state of full and perfect health, in which the digestive and generative organs are vigorous, and true to their own action, it is probable, there is no food that can support life, but may have a sufficient quantity of organic molecules chylified and secreted for the ordinary purposes of procreation; and hence we may satisfactorily account for the population of the lower classes of the multitude. But when the stomach or sexual organs are debilitated, whether by disease or age, and a sufficient quantity of organic elements are not, in consequence, secreted from the ordinary diet, it is then necessary for the physician to prescribe a diet more stimulative, either to the one or the other, or perhaps to both. The effect of wine and cordials, that act generally on the animal system, is well known by the experience of every day: but it is not improbable that a great variety of medicaments exist, which are topically stimulant, and excite an increased secretion of organic molecules, by irritating the appropriate organs alone.

The principle which thus applies to man, applies also to other animals with equal force. Virgil has not been unmindful of it, and has expressed himself with such exquisite elegance of diction, and so precisely to the point, in his rules for the selection of a colt to form the future stallion, that I am persuaded I shall not transgress upon the patience of my readers by inserting both the original, and the spirited version of Mr. Sotheby.

His animadversis, instant sub tempus; et omnes
Impendunt curas denso distendere pingui,
Quem legêre ducem, et pecori dixêre maritum:
Pubentesque secant herbas, fluviosque ministrant,
Farraque; ne blando nequeat superesse labori,
Iuvalidique patrum referant jejunia nati.
Ipsa autem macie tennant armenta volentes.
Atque ubi concubitus primos jam nota voluptas
Sollicitat, frondesque negant, et fontibus arcent.
Sæpe etiam cursu quatiunt, et sole fatigant;
Cum graviter tunsis gemit area frugibus, et cum
Surgentem ad zephyrum paleæ jactantur inanes.

So much imports it that the seeds of life
With seeds should mix symphoneous, that the gross
Condense the rare, the rare the gross dilute,
And man with woman duly pair'd unite.
Much, too, concerns it what the foods employ'd;
For some augment the genial stores, and some
Dissolve their crasis, and all power destroy.—
Nor small the moment in what mode is dealt
The bland delight. The sage who views minute

Hoc faciunt, nimio ne luxu obtusior usus
Sit genitali arvo, et sulcos oblimet inertes;
Sed rapiat sitiens venerem, interiusque recondat.
Georg. iii. 123.

The choice once fixt, each pleasing care employ,
And rear the pamper'd sire for bridal joy.
Cut for his fresh food grass that tufts the mead,
Swell with rich grain, to gushing fountains lead,
Lest the sweet toil his languid limbs o'erpower,
And a weak race betray th' ungenial hour.
But when connubial joys new passion fire,
By famine tame the bride's intense desire.
From pampering food, and gushing fount restrain,
Tire in the sun, and press along the plain,
When groans the barn beneath the dusty flail,
And the wing'd chaff light flies before the gale:
Then hymeneal gods the rites approve,
And crown with blest increase the joys of love.

In the rearing of bees, and especially the humble-bee, the same sort of attention appears to be always crowned with success. On which subject, the reader may consult M. Hubert's treatise with edification as well as entertainment.

Ver. 1327. *Nor small the moment in what mode is dealt*
The bland delight.] This observation also applies to the cases of physical debility, from age, or disease. It was doubted by Harvey, as I have already observed, from dissections that fell under his own eye, whether the seminal fluid of the male ever entered the uterus; but he seems to reason from instances in which it was probably protruded with too small a portion of vigour for this purpose. In all such cases, or when the quantum of organic molecules, secreted from the system into the seminal fluid of either sex, is very scanty, the observation of our poet will certainly apply with considerable force, and the regulations he prescribes may probably have their use. In the position he recommends, the seminal fluid of the male will have the best chance, from the common laws of gravitation, of entering without loss into the uterus: and if by any peculiar position an additional degree of orgasm can be excited, as it undoubtedly may, the seminal fluid will be protruded with a much greater degree of projectile power, and consequently be much more likely to accomplish its destined purpose. It is perhaps, on this account, principally, that the families of the poor of all descriptions are generally more numerous than those of the higher orders. As it is almost the only animal gratification that lies within their sphere, they doubtless engage in it with a higher degree of zest, and from the superiority of the muscular strength, both of the male and female, arising naturally from a life of superior labour, there must be a greater exercise of physical vigour, as well as of venereal appetency. The entire subject, though a delicate one, is of ex-

Quadrupedumque magis ritu, plerumque putantur
Concipere uxores, quia sic loca sumere possunt,
Pectoribus positis, sublatis semina lumbis.
Nec molles opus sunt motus uxoribus hilum:
Nam mulier prohibet se concipere, atque repugnat,
Clunibus ipsa viri Venerem si læta retractet;
Atque exossato ciet omni pectore fluctus:
Eicit enim sulcum rectâ regione viâque
Vomeris, atque locis avortit seminis ictum:
Idque, suâ caussâ consuerunt scorta moveri,
Ne conplerentur crebro, gravidæque jacerent;
Et simul ipsa viris Venus ut concinnior esset:
Conjugibus quod nihil nostris opus esse videtur.

Nec divinitus interdum, Venerisque sagittis,

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treme importance: there are many families to whom it is of the utmost degree of moment, since the possession of a child would be the greatest temporal blessing they could enjoy; and I trust it will not be attributed to levity, that I have dwelt upon it thus long. There are some, who have rendered this part of our poem in a voluptuous dress; there are others, who have omitted it altogether: but I put it to the serious determination of the world at large, whether I have not best consulted the moral reputation of our poet, in permitting him to appear in his own natural and unqualified attire.

Ver. 1337. ——*the genial share*
Oft turn they from the furrow ——] This truly chaste and delicate simile has been often usurped by the libidinous muse, and accommodated to her own salacious ideas. I pass them by with disgust, and shall only instance an individual copy from Virgil, in which it has been employed with its original purity:

Hoc faciunt, nimio ne luxu obtusior usus
Sit genitali arvo, et sulcos oblimet inertes.

Ver. 1344. *Nor from the darts of Venus, nor the smile*
Of gods above——] The absurd maxim, common among ourselves, in the present day, that marriages are made in heaven, and that, in consequence of such predetermination, nothing can alter the fate

Herds, and the savage tribes by nature led,
Holds that the virtuous matron chief conceives
When with subsiding chest, and loins erect
Her dulcet charms she offers, fittest then
The luscious tide t' absorb: for nought avail
Voluptuous motions, the perpetual heave
Of haunch obscene, and ever-labouring lungs.
These, rather, urg'd beneath the tender fray,
All fruit prohibit; since the genial share
Oft turn they from the furrow as it holds
Its course direct, and break th' impinging shock.
And hence th' immodest harlot acts like these
Ceaseless indulges, to preclude increase,
And more transport the vagrant form she clasps.
Arts the chaste matron never needs essay.
Nor from the darts of Venus, nor the smile

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that attends them, whether of mutual happiness or infelicity, was not unknown, as we learn from the verses before us, to the ancient Romans. Our poet, however, teaches, and most gravely concludes with a different doctrine. In this, as in other respects, our fortune, he tells us, is entrusted to our own hands: we may be happy, if we chuse it. The blessing does not depend upon the superficial and transitory charm of the face, which is not subjected to our control, but on the cultivation and due government of the mind, which is pliant to any direction we may determine upon. Finally, he demonstrates by a simile, equally beautiful and impressive, that genuine affection and gentleness of manner cannot fail of an eventual triumph. However severe the labours to which they are called; however rigid the heart with which they have to contend, like the soft, but ever-during drops of the fountain, they will not idly descend, and be wasted in their passage, but, in a series of time, will indelibly imprint the stony substance on which they fall with their own character, and smooth off all its rugged edges.

Ver. 1332. *Yet urg'd perpetual, such the sternest heart*
Must gradual soften,——] Most pertinently in this place does Mr. Wakefield recal our attention to the following admirable query of Terence:

Deteriore fit ut formâ muliercula ametur:
Nam facit ipsa suis interdum femina factis,
Morigerisque modis, et mundo corpore culta,
Ut facile insuescat secum vir degere vitam.

Quod super est, consuetudo concinnat amorem:
Nam, leviter quam vis, quod crebro tunditur ictu,
Vincitur id longo spatio tamen, atque labascit.
Nonne vides, etiam guttas, in saxa cadenteis,
Humoris longo in spatio pertundere saxa?

Adeon' porro ingratum, aut inhumanum, aut ferum
Ut neque me *consuetudo*, neque *amor*, neque pudor
Conmoveat? Andr. I. v. 44.

Heaves there a heart so barb'rous, so perverse,
That *mildness*, *habit*, *love* can never tame?

Ver. 1354. *Hast thou not seen the fountain's falling drops*] This beautiful simile is repeated from Book I. 356. in the Note on which verse the reader will meet with a variety of allusions and parallel images. I cannot forbear, however, inserting the following passage from Propertius, in addition to the number already cited:

Sed tamen obsistam: *teritur* rubigine muero
Ferreus, et *parvo* sæpe *liquore silex*.
ii. 19. 35.

Of gods above is she of homelier make
Frequent belov'd: the praise is all her own.
By her own deeds, by cleanliness most chaste,
And sweet consenting manners, the delight
Lives she of him who blends his lot with her's.
Such virtues must prevail, and day o'er day
Perfect their power; for, though of gentlest kind,
Yet urg'd perpetual, such the sternest heart
Must gradual soften, and at length subdue.—
Hast thou not seen the fountain's falling drops
Scoop in long time the most obdurate stone?

Yet I'll persist: rust wears the sturdiest sword,
And flint to water yields, though gentlest pour'd.

I close the present Book with comparing this elegant proverbial apostrophe of Lucretius with an oriental adage of equal elegance, as it occurs in the Hitópades'a of Vishnusarman, translated by Sir William Jones. It is obvious, that it refers to the industrious labours of the silk-worm:

"With time and patience the *leaf* of the mulberry-tree becomes *satin*."

THE

NATURE OF THINGS.

BOOK THE FIFTH.

ARGUMENT.

The difficulty and impossibility of composing an eulogy equal to the merits of Epicurus, who, on account of his vast and important discoveries, is far more entitled to the appellation of a God, than Ceres, Bacchus, Hercules, or any other deified hero of antiquity. The subject of the Book explained, which is Cosmogony, or the origin and laws of the visible world, with its inhabitants. The poet asserts, and proves, that its various ramifications of earth, ocean, sun, and stars, are all equally corruptible; and in themselves neither animated, nor parts of the deity, nor mansions of particular gods. The deity himself did not create the elemental substance of the world, proved from the existence of its physical and moral evils. That all the components parts of the material system, as earth, air, fire, and water, had a beginning, and consequently will have an end. Chaos,—and Creation, in its regular and progressive order: the origin of ether, of the sun, moon, and stars: their laws, parallaxes, relative proportions, and phænomena. Summer and winter solstices: alternation of day and night: solar and lunar eclipses, and their cause. Rise of the vegetable and animal world: description of primæval life and manners; and their gradual advance towards civilization and a social compact. Origin of superstition and mythology; mineralogy; art of war. Origin of the useful and polite arts: their progress and tendency towards perfection.

DE RERUM NATURA.

LIBER QUINTUS.

Quis potis est dignum pollenti pectore carmen
Condere, pro rerum majestate, hiisque repertis?
Quisve valet verbis tantum, qui fingere laudes
Pro meritis ejus possit, qui talia nobis,
Pectore parta suo quæsitaque, præmia liquit?
Nemo, ut opinor, erit, mortali corpore cretus.
Nam, si, ut ipsa petit majestas cognita rerum,
Dicundum est, Deus ille fuit, Deus, inclute Memmi!

Ver. 1. *Who from his burning breast, a strain may strike*
Meet for the boundless majesty of things?—]
The sublime subject in which our philosophic bard is engaged, is as unbounded as the universe: he here professes his consciousness of its magnitude, and seems to labour beneath the mighty task he has imposed upon himself: a task to which, he immediately tells us, no mortal is equal. The apostrophe is unlimited:

Quis potis est dignum pollenti pectore carmen
Condere, pro rerum majestate, hiisque repertis?

Marchetti confines it to the poet himself, and hereby loses half the force of the passage:

Chi *mi* dara la voce, e le parole
Convenienti a sì nobil soggetto?

Ver. 4. ——*worthy his desert*
Whose matchless mind such wonders first disclos'd?]
Lactantius, as Faber justly observes, is strangely mistaken, in referring this verse to Pythagoras, Thales, Socrates, or some other philosopher of higher antiquity than Epicurus. The whole poem is built upon the Epicurean basis: Epicurus is the leading star in every book; and that he is here intended, we learn incontrovertibly from ver. 60, which constitutes but a part of one common opening:

THE NATURE OF THINGS.

BOOK THE FIFTH.

Who, from his burning breast, a strain may strike
Meet for the boundless majesty of things?
Things now develop'd? who, in words alone,
May pour forth praises worthy his desert
Whose matchless mind such wonders first disclos'd?
No mortal, doubtless. For, of things explor'd,
Such the majestic dignity, the sage
Must, so to speak, have been a god indeed:

His steps I follow, and by him illum'd,
Unlock the laws whence first the world uprose.

Ver. 7. ——*the sage*
Must, so to speak, have been a god indeed:] This audacity of metaphor we meet with, more frequently, perhaps, in the sacred writings, than in any others, where the princes of the earth are repeatedly denominated gods. But it is by no means confined to Lucretius among the Roman writers. Virgil applies the term to Augustus:

——Deus, deus ille, Menalca!

Ecl. v. 64.

Thus too, Cicero, in a passage pertinently quoted by Wakefield, in an oration delivered after his return to the senate: "Princeps P. Lentulus *parens* ac *deus* nostræ vitæ, fortunæ, memoriæ, nominis." "The illustrious Publius Lentulus, the *parent and god* of our own life, our fortune, our renown, our name." And yet Cicero, though he could thus adopt this very phraseology, and inspirit it with an additional degree of energy, even where the case did not demand it, has not only not forborne to object to this very passage of our own poet, qualified as it is by the preamble *si dicendum est, if it may be so said*, but has given it a false interpretation, by referring to it

Qui princeps vitæ rationem invenit eam, quæ
Nunc adpellatur Sapientia; quique per artem
Fluctibus e tantis vitam, tantisque tenebris,
In tam tranquillo, et tam clarâ luce, locavit.

Confer enim divina aliorum antiqua reperta:
Namque Ceres fertur fruges, Liberque liquoris
Vitigeni laticem, mortalibus instituisse;

for a proof that Epicurus was actually deified by his followers, and adored with religious worship: "Quæ quidem cogitans, soleo sæpe mirari nonnullorum insolentiam philosophorum, qui naturæ cognitionem admirantur, ejusque *inventori*, et *principi* gratias exsultantes agunt; *eumque venerantur ut deum:* liberatos enim se per eum dicunt gravissimis dominis. Quæst. Tusc. i. 21." "While thus meditating, I often wonder at the insolence of some philosophers, who are astonished at their knowledge of nature, and exultingly give thanks to the *chief and inventor of this knowledge; and worship him as a god*, because he has freed them, as they tell us, from the most tyrannic masters."

Cicero, who was himself initiated at an early age into the philosophy of Epicurus, must have known this assertion to have been equally false in fact, and inconsistent with every principle of the Epicurean hypothesis at the time he wrote it. But new converts make the warmest espousers of every cause; and hence, after he had forsaken Epicurus for Zeno, he was at all times immoderately lavish in abusing his first faith. Upon this subject, I must intreat the reader to return, for fuller information, to the prefixed Life of Lucretius, where he will find that his friend Cassius, who still pertinaciously adhered to the creed of their youth, warmly expostulated with Cicero for this ungenerous conduct: to whom the orator replied, that the opprobrium with which himself, and many others, aspersed the Epicurean school, was only in consonance with the vulgar opinion of its tenets; for that Cassius well knew he was perfectly aware there was no foundation for such opprobrium in the tenets themselves.

This unauthorized abuse of the Stoic philosophers, however, has been greedily laid hold of, and improved upon by multitudes in modern times; and it has been ingeniously added to the original tale, that Epicurus himself, during his life-time, proudly looked forward to the possession of divine honour at his death; although not an individual scrap of written authority can be advanced in support of so daring an assertion—although it would have instantly subverted his whole system to have pretended to any kind of apotheosis, and although Lucretius himself has declared, in the most positive manner, that the life of Epicurus is totally extinct, and that he mouldered away in his grave like the meanest of mortals. See Book III. 1082. Nevertheless, so general has this unfounded assertion of Cicero, and the Stoics at large been admitted, even among men of letters, who ought to have known better, that Gassendi has thought it necessary to enter into an elaborate defence of Epicurus from this mendacious charge: a task, indeed, which he has executed with the completest success.—Can the reader conceive that Cicero, after so much severity, has not only denominated Lentulus the politician, but even Plato the philosopher, a *God;* and this in his Tusculan Shades, where there was no popular motive to excite any undue boldness of metaphor? See his epistle to Atticus, l. iv. ep. 15. Surely, if Cicero might put in such a claim for

A god, illustrious Memmius! he who first
The rules of life devis'd, now term'd by all,
Sole, solid Wisdom; he whose happy art
From such wild waves such shades of ten-fold night,
Leads us to truth, tranquillity, and day.
What are to him the gods of earlier times?
Ceres, who taught the fruits of earth to rear,
As fame reports? or Bacchus, first who stole

Plato, it was with but an ill grace that he opposed the disciples of Epicurus in their application of it to the founder of their own sect. It is truly astonishing, therefore, to see almost all the commentators and translators of Epicurus of a later date, still applying this false interpretation of Cicero to the passage before us; and maintaining, in consequence, that Lucretius is here contending for the deification of the Grecian philosopher. Des Coutures has carried this idea, in his translation, to the most extravagant height: "such a man must have been a god," says he; "yes! without doubt, Memmius, his *birth* must have been divine;"—and ver. 52. "assuredly, we are called upon in common gratitude to erect to him *temples* and *altars*." In the original, however, we meet with neither *divine birth*, *temples*, nor *altars*. "Il faut dire que ce grand homme fut un Dieu. Oui sans doute, Memmius, *sa naissance fut divine*.—Celui merite assurément que notre reconnoissance lui dresse des *temples et des autels*." If Lucretius, however, have sinned, he has only sinned, as I have before observed, with the sacred writers. The holy term *eloim*, the divinity pluralized, is applied to Moses by the Almighty himself, Exod. vii. 1. "Behold, I have made thee a *god* (אלהי) to Pharoah." It is applied, in like manner, to a messenger from the Deity, in Judges xiii. 22. and even to the golden calf, by Aaron himself, which is denominated, still plurally, אלהו זהב (gods of gold). In like manner, in modern times, the pious and excellent Tillotson: "To be charitable, and helpful, and beneficial to others, is to be a good Angel, and a Saviour, and a God to men." Sermon on Acts x. 38.

So Thomson, speaking in reference to the philosophers of former periods generally:

Sages of ancient time, as Gods revered,
As Gods beneficent, who bless'd mankind
With arts and arms, and humaniz'd a world.

Ver. 15. Ceres, *who taught the fruits of earth to rear, As fame reports?*——] Hence Virgil, alluding to the same tradition:

Prima Ceres ferro mortales vertere terram
Instituit. Georg. i. 147.

First pitying Ceres taught the famish'd swain
With iron shares to turn the stubborn plain.
Sotheby.

Ver. 16. ——*or* Bacchus, *first who stole The vine's purpureal spirit?*——] Our poet has before united these popular divinities by an allegorical marriage, but which, nevertheless, constituted a part of the serious mythology of the multitude. See Book IV. ver. 1214. Virgil addresses them conjunctively in the opening of his Georgics, i 5. and from entitling them clarissima mundi lumina, "fairest lights of the world," it should appear that they occasionally represented the sun and the moon, as Prætextatus has attempted to prove, in the Saturnalia of Macrobius, i. 18. and, in consequence, become elegant and pertinent symbols of the changing seasons, and the fertilizing power of the solar orb.

Quom tamen hiis posset sine rebus vita manere ;
Ut fama est, aliquas etiam nunc vivere genteis :
At bene non poterat sine puro pectore vivi.
Quo magis hic merito nobis Deus esse videtur :
Ex quo nunc etiam, per magnas didita genteis,
Dulcia permulcent animos solatia vitæ.

Herculis antistare autem si facta putabis,

——Vos, o clarissima mundi
Lumina, labentem cœlo quæ ducitis annum,
Liber, et alma Ceres ; vestro si munere tellus
Chaoniam pingui glandem mutavit aristâ,
Poculaque inventis Acheloïa miscuit uvis.

——Ye lights of heaven ? whose sovereign sway
Leads on the year around th' ethereal way ;
Bacchus and Ceres ! if, beneath your reign,
Earth chang'd Chaonian mast for golden grain,
And the new grape's uncultur'd vintage gave
To mix its sweets with Acheloüs' wave. Sotheby.

This version of Mr. Sotheby I cannot, therefore, but regard as correct ; though, if I recollect aright, both Dr. Warton and the Abbé de Lille, in notes on their respective translations of the passage, think differently, and give a dissimilar interpretation. I refer the reader, however, upon this subject, to the Note on Book IV. 1214, where the history and mythology of these divinities are detailed at some length.

Ver. 18. ——*and, through many a clime,*
This moment know not ;——] The observation is as true now as it was in the time of our poet : and notwithstanding the increased intercourse of different nations, from the augmentation of commerce and trade, we may yet say, with Faber, that scarcely the sixth part of mankind know what wheat is, or, perhaps, any other kind of corn. The growth of corn implies an advance from a state of barbarism to some degree of civil society : but the sixth part of mankind are not yet civilized to a degree sufficient for this purpose. The American Indians are for the most part hunters to the present moment, and subsist upon the prey they obtain : among the Kamschatkadales, and other barbarians of the North, the food commonly employed is oil, fishes, and saw-dust ; and among all the newly discovered islands of the Pacific Ocean, yams, fishes, or the fruit of the bread-tree, the kangaroo, and not unfrequently, perhaps, human sacrifices. It is useless to pursue the sketch farther.

Ver. 19. ——*but of virtue void,*
And purity of heart, man ill can thrive.] We often hear, even in the present day, lectures of morality preached by those who do not practise them. But the disciples of Epicurus, contemporary with Lucretius, and more particularly our ethic bard himself, have a right, from the uniform tenour of their lives, to moralize with the severity here exhibited. The gratification of the corporeal senses was not their object, but tranquillity of heart, and an improvement of the mind. The pleasures which such propose to us are not dependent upon time or accident ; they are durable as life itself. Those who, like Ceres or Bacchus, have contributed to the rational enjoyments of the body, have meritoriously exerted themselves ; but sickness, senility, and a thousand other changes and chances of life, must occasionally incapacitate us for such pleasures. Over persons addicted to such pursuits alone, the real Epicurean may therefore justly exult, and infinitely more still over those whose whole existence is blood-

The vine's purpureal spirit? foods mankind
Without may flourish, and, through many a clime,
This moment know not; but of virtue void,
And purity of heart, man ill can thrive.
Hence ampler far his claim to rites divine
Whose dulcet solaces whole nations feel,
Soothing the wounded spirit as they flow.
Should'st thou with him e'en Hercules compare,

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shed and murder, whatever may be their titles, and however they may be applauded in the fleeting hour of their prosperity. "Sapientia enim est una," observes Cicero, "quæ mœstitiam pellat ex animis, quæ nos exhorrescere metu non sinat, quâ præceptrice in tranquillitate vivi potest, omnium cupiditatum ardore restincto." De Fin. l. i. "It is Wisdom alone that drives uneasiness from the mind, and forbids us to be overpowered by terror in any situation. Guided by this preceptress, we may live with tranquillity, and extinguish the flame of every inordinate desire." This is the Wisdom which Lucretius is extolling, and which Solomon has still more forcibly adjured us to the love of, in an almost infinite variety of passages, of which the following, containing an obvious reference to the union of the vine and the elm, is not the least beautiful. Prov. iv. 7, 8:

ראשית חכמה קנה חכמה
ובכל קנינך קנה בינה:
טלסלה ותרוממך
תכבדך כי תחבקנה::

Wisdom, first, O cultivate Wisdom!
Above every possession cultivate Understanding!
Clasp around her, and she shall exalt thee;
She shall decorate thee whilst embracing her.

Ver. 24. *Should'st thou with him e'en* Hercules *compare,*] Our poet is highly judicious in his selection. It would degrade the character he is adverting to, to compare him with any of the heroes of antiquity, who were actuated by ambition or personal considerations alone. He is drawing a contrast between Epicurus, who, by his precepts and example, enlightened the mind of man, and freed it from the terrors of ignorance, and superstition, and Ceres, Bacchus, and Hercules, who, by their respective, and, certainly, laudable exertions, relieved his corporeal distresses, and freed him from the terrors of want, wild beasts, and other mischiefs that haunted the world in their days. The labours of Hercules, here individually referred to, are too generally known, both in their fabulous history, and symbolic allusion, to render any farther explanation necessary. I shall take the liberty, however, of inserting the following passage from the Odyssey, in which they are all represented as embossed around the zone of the hero's shade in the infernal world:

——ὁ δ' ἐρεμνὴν νύκτ' ἐοικὼς
Γυμνὸν τόξον ἔχων, καὶ ἐπὶ νευρῇφι ὀϊστὸν
Δεινὸν παπταίνων, αἰεὶ βαλέοντι ἐοικώς.
Σμερδαλέος δ' ἀμφὶ στέρνοις τετελαμένος ἦεν
Χρύσεος ἦν τελαμὼν, ἵνα θαυμάσια ἔργα τέτυκτο.
Ἄρκτοί τ', ἀχρεῖοί τε σύες, χαροποί τε λέοντες,
Ὑσμῖναί τε μάχαι τε, φόνοι τ', ἀνδροκτασίαι τε. Λ

Gloomy as night he stands, in act to throw
Th' aërial arrow from the twanging bow:
Around his breast a wondrous zone is roll'd
Where woodland monsters grin in fretted gold;
There sullen lions sternly seem to roar,
The bear to growl, to foam the tusky boar;
There war and havoc, and destruction stood,
And vengeful murder red with human blood.

Pope.

Longius a verâ multo ratione ferere.
Quid Nemeæus enim nobis nunc magnus hiatus
Ille leonis obesset, et horrens Arcadius sus?
Denique, quid Cretæ taurus, Lernæaque pestis,
Hydra, venenatis posset vallata colubris?
Quidve tripectora tergemini vis Geryonaï,
Et Diomedis equei, spirantes naribus ignem,
Thracia, Bistoniasque plagas, atque Ismara propter?

In this passage, as in Lucretius himself, who has judiciously followed the popular mythology, these various labours are attributed to one and the same Hercules. But it is suspected, and perhaps justly, by many critics, that they were the result of several different personages of the same name, all of whom acquired the appellation of Hercules, from the possession of a degree of muscular strength, connected with intrepidity of mind, far superior to those of their contemporaries. The term Hercules, Ur-Cal-Es, "an ascending flame of fire," proves obviously its origin to be Chaldaic: and from the simple interpretation of the name alone, Mr. Allwood, who translates it, in some measure, different, ("an eminence dedicated to the effulgence of fire,") not only denies the existence of any ancient hero who individually personified this multiform character, but strenuously contends, that the vigorous and gigantic figure referred to, as the Egyptian deity of this name, was merely a mountain or temple dedicated to solar worship. Yet nothing can be more inconclusive, or more capable of betraying us into infinite errors, even in real history, than a literal adherence to the interpretation of names, in judging of the characters of the persons or things on whom they were conferred: and upon the very same ground, I would undertake to prove, that neither Adam, Cain, or Abel, had possessed a real existence, their names being compounds of facts or events which bear no relation to their own personal entity. By pursuing a similar plan, Mr. Bryant, as I have already observed, has decided, that there never was such a place as Troy, nor such heroes as Homer has described in his epic poems. By the present theory, Mr. Allwood has blotted out of the book of existence, all the fabulous gods, goddesses, and heroes of India, Egypt, and Greece;—and were the same hypothesis to be rigidly persevered in, almost every man, of every possible description, excepting our own contemporaries, who are capable of speaking for themselves, might be cancelled from the page of genuine biography, and simply regarded as an ideal, allegoric, or hieroglyphic character. I am compelled, therefore, to admit the existence of some very ancient and celebrated hero of this denomination; and the principle I collect from his name is, that his family, who gave it him, and doubtless himself also, were attached to solar worship. He was probably possessed of vast muscular strength, as well as undaunted courage: whence his name has been proverbially applied, through every successive age, to the possessor of the same qualities; in consequence of which, it is not improbable that, in many instances, the exploits of his cognominals or descendants have been attributed to himself. He must have existed, however, and have been deified at a very early period of the world, for we find traditions concerning him almost as early as those of Jupiter Ammon, and a worship instituted and pro-

Fam'd for exploits, from reason far thou err'st.
For what were now to us, with all their threats,
Nemæa's lion, or th' Arcadian boar?
The bull of Crete, or hydra-headed snake
That rear'd, o'er Lerna's banks, his dreadful fangs?
Or what to us the triple-breasted strength
Of three-fac'd Geryon, or the horses wild
Of Diomed, o'er Ismara, and Thrace,
And all Bistonia, snorting ceaseless fire?

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pagated almost as extensively. The existence of both, as objects of religious adoration, seems to have been contemporaneous in Crete, Lybia, and Italy: and while in Hindu the former was acknowledged under the denomination of Brahma, "the father of gods and men;" the latter was worshipped as "the glory of heroes," under the title of Sandes, Sanes, Desanes, Dorsanes; probably from the Babylonian Sas, or Saos, which was again confounded with the generic appellation Belus. The origin of Sas and Saos is problematical. Mr. Allwood hazards a conjecture, from the existence of the Oriental prefix Za or Sa, that some such expression as this actually existed, as an independant term, in far distant ages, both in Egypt and Babylonia; and that these were compounded with some other simple term, as As or Es, in order to complete an epithet, whence the compounds Sas, Saos, or Zas, Zaos, which were applied to Bacchus, Jupiter, or whatever other deity was regarded as supreme and unrivalled. The Ethiopians have still a radical not dissimilar, (Zahh), the original import of which is now lost, but it is retained in its duplicated form , and implies, literally, *exundation*, or an overflow of water, and, in its metaphorical sense, an excess or superabundance of any thing else. It occurs in the Ethiopic version of the New Testament, Luke vi. 38. and corresponds with the Greek ὑπερεκχυνόμενον.

From the same origin, he deduces Σας, the sun, or fountain of light, and Σεα, a title for Hecate or Diana. And hence, from the well-known conversion of the different radical systems of idolatry into each other, the same species of term may have been occasionally applied to any of the deities who were originally worshipped as types of the ark, the sun, or the serpent. Σεα, it might be added, was the Greek term for corn: an appropriation of the term not difficult to be accounted for upon this principle: for Σεα was Diana, Diana was Venus, Venus was Ceres; or, rather, all these deities were alike worshipped under the generic term, Da-mater—Δημητηρ, or Demeter. See this commutability more fully illustrated in Note on Book IV. v. 1214.

Ver. 33. ——*snorting ceaseless fire?*] In the original, thus:

——equei, spirantes naribus ignem,
Ver. 29.

which Virgil has literally transfused into his description of the bulls of Colchis, overpowered and yoked by Jason:

——tauri spirantes naribus ignem:
Georg. ii. 140.

—bulls from their nostrils snorting fire.

Tanto opere obficerent nobis [uncisque timendæ
Unguibus, Arcadiæ volucres,] Stymphala colentes?
Aureaque Hesperidum servans fulgentia mala,
Asper, acerba tuens, inmani corpore, serpens,
Arboris amplexus stirpem, quid denique obesset,
Propter Atlanteum litus, pelagique severa,
Quo neque noster adit quisquam, nec barbarus audet?
Cætera de genere hoc quæ sunt portenta perempta,
Si non victa forent, quid tandem viva nocerent?
Nihil, ut opinor; ita ad satiatem terra ferarum
Nunc etiam scatit, et trepido terrore repleta est,
Per nemora, ac monteis magnos, sylvasque profundas:
Quæ loca vitandi plerumque est nostra potestas.
At, nisi purgatum est pectus, quæ prælia nobis,
Atque pericula, sunt ingratiis insinuandum?
Quantæ tum scindunt hominem cupedinis acres
Solicitum curæ? quanteique perinde timores?
Quidve superbia, spurcitia, ac petulantia, quantas
Efficiunt clades? quid luxus, desidiæque?

Hæc igitur qui cuncta subegerit, ex animoque

Ver. 37. *Th' enormous dragon that, with eye severe, Clang round the tree* ——] To the same effect, Euripides:

Δράκοντα πυρσωπὸν, ὃς
Ἄτλαντος ἀμφέλικτος ἑλιχθεὶς ἐφρούρει,
Κτανών: Herc. Fur. 398.

The dazzling dragon round the tree that clung
With folds enormous to the ground he fell'd.

What woes could these now menace? or the birds
With huge, uncleanly talons that defil'd
The climes of Arcady? or, feller still,
Th' enormous dragon that, with eye severe,
Clung round the tree of vegetable gold,
And in Hesperia kept the glittering fruit?
How now could such affect us? fixt remote
O'er boundless seas, beyond th' Atlantic shores,
Where never mortal else, refin'd or rude,
Dar'd urge his desperate sail? E'en though alive,
Unconquer'd still, from monsters such as these
What need we dread? Nought, doubtless, or I err.
For savage monsters crowd the world e'en now,
Fearful and ghaunt; and hills, and groves remote,
And pathless woods re-echo to their roar;
Scenes, still, our feet with ease may ever shun.
But, with the mind unpurg'd, what tumults dire,
What dangers inly rage! what hosts of cares,
From various lusts, convulse the total man!
What terrors throng! what dread destruction flows
From pomp, pride, passion, indolence, and vice!
He, then, that these o'erpowers, and from the breast

Ver. 41. ——*beyond th'* Atlantic *shores,*] Doubtless, as Mr. Wakefield observes, beyond the boundaries of the Western Ocean. Thus, Claudian:

Quid numerem gentes, *Atlanteosque recessus*
Oceani? De Nupt. Hon. et Mar. 250.
Why should I paint the realms, th' Atlantic bays
That skulk from ocean?

Expulerit dictis, non armis, nonne decebit,
Hunc hominem numero divôm dignarier esse?
Quom bene præsertim multa, ac divinitus, ipsis
Jam mortalibus, e divis, dare dicta süerit,
Atque omnem rerum naturam pandere dictis.
Quoius ego ingressus vestigia, dum rationes
Persequor; ac doceo dictis, quo quæque creata
Fœdere sint, in eo quam sit durare necessum;
Nec validas valeant ævi rescindere leges.
Quo genere in primis animi natura reperta est,
Nativo primum consistere corpore creta;
Nec posse incolomem magnum durare per ævom:
Sed simulacra solere in somnis fallere mentem,
Cernere quom videamur eum, quem vita reliquit.
Quod super est, nunc huc rationis detulit ordo,
Ut mihi mortali consistere corpore mundum,
Nativumque simul, ratio reddunda sit, esse:
Et, quibus ille modis congressus materiaï
Fundarit terram, cœlum, mare, sidera, solem,
Lunaïque globum: tum, quæ tellure animantes
Exstiterint; et, quæ nullo sint tempore natæ:

Ver. 58. *Since of themselves, too, and in strain divine,*] I read with Mr. Wakefield, who is sanctioned by almost all the ancient collations, v. 53.

Quom bene præsertim multa, ac divinitus, ipsis
Jam mortalibus, e divis, dare dicta süerit.

In all the common editions, we meet with the passage thus:

Cum bene præsertim multa, ac divinitus ipsis
Immortalibu' de divis, dare dicta suerit.

The translators have, in general, followed the com-

Drives, not by arms, but precepts sage and pure—
Say—ought not this man with the gods to rank?
Since of themselves, too, and in strain divine,
Much to the race of mortals he disclos'd,
And op'd the nature of created things.
His steps I follow; and, by him illum'd,
Unlock the laws whence first the world uprose;
Laws that still guide it, and to utmost time
Will guide resistless; whence the human soul
Was stampt corporeal, impotent to live
Age after age triumphant o'er decay,
Proving that nought but phantoms cheat the mind,
When oft in sleep we deem the dead appear.

What then, in order, waits us but to sing
How nature's perishable system sprang,
As sure of fate as erst of natal hour;
How, from the mass material, heaven and earth,
Sun, moon, and stars, harmonious swell'd to life;
What animated tribes, from age to age,
Have peopled space, and what have never liv'd:

---

mon lection of the editors. Marchetti is the only exception I know of: from his version there can be no doubt that the copy he consulted retained *jam mortalibus*:

Massime avendo de' medesmi dei
Scritto divinamente, e delle cose
Tutta svelata *a noi* l'occulta essenza.

Epicurus, as I have observed in the Life of Lucretius, wrote a treatise on Holiness, περὶ ὁσιότητος; and it is to this treatise Faber apprehends our poet here refers. The reader may indulge the same fancy if he please.

Quove modo genus humanum variante loquelâ
Cœperit inter se vesci per nomina rerum:
Et, quibus ille modis divôm metus insinuarit
Pectora, terrarum qui in orbi sancta tuetur
Fana, lacus, lucos, aras, simulacraque, divôm.
Præterea, solis cursus lunæque meatus,
Expediam, quâ vi flectat Natura gubernans:
Ne forte hæc inter cœlum, terramque, reamur
Libera sponte suâ cursus lustrare perenneis,
Morigera ad fruges augendas, atque animanteis:
Neve aliquâ divôm volvi ratione putemus.
Nam, bene quei didicere deos securum agere ævom,
Si tamen interea mirantur, quâ ratione
Quæque geri possint, præsertim rebus in illis,
Quæ supra caput ætheriis cernuntur in oris;
Rursus in antiquas referuntur religiones,
Et dominos acreis adsciscunt, omnia posse

Ver. 74. ——*and what have never liv'd:*] He means, obviously, Centaurs, Scyllas, Chimæras, and other equally mis-shapen monsters, whose existence was uniformly credited by the multitude in his day: and concerning the absurdity of which belief he largely and philosophically treats, from ver. 895. to 941. of the present Book. To monsters of this class, Faber adds, as equally intended by our poet, *hermaphrodites*, and Creech has closely copied him. The opinion may, or may not, be correct; it is neither opposed, nor supported by the context. That animals of this description exist among insects, fishes, and vegetables, we cannot but allow, but a perfect hermaphrodite has never yet been discovered among quadrupeds, much less among the human race. See Note on Book ii. 878.

Ver. 85. ——*or hold the gods*
Guide the vast frame,——] See Note on Book I. v. 57. and 62. For want of a due attention to the real system and belief of Epicurus, the annotators have been in general full of abuse upon this passage.

Whence man, in various tongues, the power possess'd
Of naming all survey'd; whence the deep fear,
Felt through the soul, of potentates divine,
Urging the nations to the culture dread
Of lakes, groves, altars, images, and fanes.
Ours, too, the task to show how Nature bends,
With power presiding, the reluctant sun,
And moon through all their courses; lest thou deem
These of themselves, 'twixt heaven and earth, fulfil
Their ceaseless rounds; renewing, as they roll,
Fruits, and the sentient tribes; or hold the gods
Guide the vast frame, unwearied, and unseen.
For he who justly deems th' immortals live
Safe, and at ease, yet fluctuates in his mind
How things are sway'd, how chiefly those discern'd
In heav'n sublime,—to superstition back
Lapses, and rears a tyrant host, and, then,
Conceives, dull reasoner! they can all things do;

Ver. 90. ——*to superstition back*
Lapses, and rears a tyrant host,——] Upon this passage, Lambinus cites the following from Cicero. De Nat. Deor. i. 20. Itaque imposuistis in cervicibus nostris sempiternum dominum, quem dies et noctes timeremus. Quis enim non timeat omnia providentem, et cogitantem, et animadvertentem, et omnia ad se pertinere putantem, curiosum, et plenum negotii, Deum? "Upon this scheme you impose upon our necks an eternal lord, of whom we must, night and day, stand in continual terror. For who is there but must dread a God that superintends all, thinks of all, notices all, contends for all as his own, and who is perpetually curious and intermeddling."

To which quotation, Mr. Wakefield, with equal pertinence, adds, from the Acts of the Apostles, cap. xv. 10. Νῦν οὖν τί, &c. "Now, therefore, why tempt ye God to put a yoke upon the neck of the disciples, which neither our fathers, nor we, were able to bear?" The apostle Peter, like Lucretius, is here adverting to the superstitious customs of the people to whom he was addressing himself. He is opposing the traditions and useless ceremonies of the Pharisees.

Quos miserei credunt; ignarei, quid queat esse,
Quid nequeat; finita potestas denique quoique
Quà nam sit ratione, atque alte terminus hærens.
Quod super est, ne te in promissis plura moremur;
Principio, maria, ac terras, cœlumque, tuere:
Quorum naturam triplicem, tria corpora, Memmi!
Treis species tam dissimileis, tria talia texta,
Una dies dabit exitio; multosque per annos
Substentata, ruet moles, et machina, mundi.
Nec me animi fallit, quam res nova miraque menti
Adcidit, exitium cœli terræque futurum;
Et, quam difficile id mihi sit pervincere dictis:
Ut fit, ubi insolitam rem adportes auribus ante,
Nec tamen hanc possis oculorum subdere visu,

Ver. 98. *These triple bodies*——] Hence Ovid, referring to this very passage:

Explicat ut caussas rapidi Lucretius ignis,
Casurumque *triplex* vaticinatur *opus*.
Trist. ii. 425.

Lucretius thus the cause of fire explains,
And dares predict this *triple system*'s fall.

Ver. 99. ——*these one common day shall doom*
To utter ruin;——] The well-known compliment paid by Ovid to the inimitable author of the poem before us, is duplicated in its delicacy by his having adopted the very words of the bard whom he compliments, and which form the original of the passage now quoted. In Lucretius, they occur thus, ver. 96.

——terras——
Una dies dabit exitio.——

In the encomiastic muse of Ovid, as follows:

Carmina sublimis tunc sunt peritura Lucreti,
Exitio terras cum *dabit una dies*.
Amor I. xv. 24.

Then shall thy verse, sublime Lucretius! fail,
To utter ruin when *one common day*
Shall doom creation.

Ver. 101. *The world's vast system shall itself dissolve*.] In the present day, this opinion is generally admitted; but our poet must have been possest of some degree of hardihood to have maintained it in his own æra at Rome, denied as it was equally by popular mythology, and the disciples of Plato and Aristotle. Plato, indeed, allowed the creation of the existing system of the world, although he denied the creation of matter: and contended, that it

While yet himself nor knows what may be done
Nor what may never; nature powers defin'd
Stamping on all, and bounds that none can pass.
First, to delay no more then, we maintain
That earth, air, ocean, these stupendous scenes,
These triple bodies so diversely rear'd,
These, Memmius! these one common day shall doom
To utter ruin; when, for ages propt,
The world's vast system shall itself dissolve.
Nor hid from me how new the creed we teach,
How wond'rous to the mind, that heaven and earth
Should perish ever; or how hard the task
By words alone such tenets to confirm.
For thus thou e'er wilt find it when thy tongue
Opes some fresh subject sight has ne'er survey'd,

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was an idea derogatory to the divinity from whom it sprang, to conceive that the beauteous machine would ever suffer dissolution. Aristotle, on the contrary, while he equally maintained the world's immortality, seems to have conceived that its immortality depended upon its eternity of form as well as of substance; that, as it never had a beginning, so it never can have an ending: in which belief he was countenanced by Ocellus Lucanus, Xenophanes, Parmenides, and many others of the earlier sages of Greece. The doctrine of Epicurus, concerning the dissolution of the world, was derived from the school of Leucippus and Democritus, from whose atomic creed, as I have often observed already, he took many of the most important articles of his own hypothesis. It was also accredited by Empedocles, Heraclitus, Anaximander, Anaxagoras, the Egyptians, and Hindus. But, as I have before remarked, it was not the popular belief, nor the belief of the most popular philosophers, when Lucretius first started it among his own countrymen, and it required some degree of preface, therefore, as well as of courage, to become its open and avowed advocate.

Ver. 107. ——*sight has ne'er survey'd,*
Nor touch develop'd, the main road's belief] He instances the two most powerful senses employed in exciting our conviction: and is conjectured by the critics to be emulating a beautiful passage of Empedocles, fortunately preserved by Clemens of Alexandria, in his treatise De Deo.

Ουκ εστι πιλασασθ' ευδ' οφθαλμοισιν ιδιστον
Ημιτερως, η χειρι λαβειν, ηπ' η τι μιγιστη
Πιθους ανθρωποισιν αμαξιτος οι φρενα πιστις

Nec jacere indu manus, via quâ munita fidei
Proxuma fert humanum in pectus, templaque mentis.
Sed tamen ecfabor: dictis dabit ipsa fidem res
Forsitan; et graviter terrarum, motibus ortis,
Omnia conquassari in parvo tempore cernes:
Quod procul a nobis flectat Fortuna gubernans;
Et ratio potius quam res persuadeat ipsa,
Subcidere horrisono posse omnia victa fragore.

Quà prius adgrediar quam de re fundere fata
Sanctius, et multo certâ ratione magis, quam
Pythia, quæ tripode a Phœbi, lauroque, profatur;
Multa tibi expediam doctis solatia dictis:
Religione refrenatus ne forte rearis,
Terras, et solem, et cœlum, mare, sidera, lunam,
Corpore divino, debere æterna meare:

Nor to the sight appeals it, whose award
We trust implicit, nor th' essaying hands
Whence chief conviction travels to the mind.

Upon which, Mr. Wakefield, with his usual promptitude, refers us for a similar idea to St. John's first Epistle, cap. i. 1. ὃ ἦν ἀπ' ἀρχῆς, &c. "That which was from the beginning, which we have heard, *which we have seen with our eyes, which we have looked upon, and our hands have handled* of the word of life." The commentator upon Creech's English version has very aptly recalled our attention upon this subject, so far at least as it relates to *vision*, to Milton's inimitable apostrophe to light:

——thus, with the year,
Seasons return, but not to me returns
Day, or the sweet approach of ev'n and morn,
Or sight of vernal bloom, or summer rose,
Or flocks or herds, or human face divine:
But cloud instead, and ever-during dark
Surround me, from the cheerful ways of man
Cut off; and, for the book of knowledge fair,
Presented with an universal blank
Of Nature's works, to me expung'd and rased;
And wisdom at one entrance quite shut out.

Par. Lost, Book III.

Ver. 109. ——*temple of the mind*] Upon the phraseology here boldly and beautifully adopted, see Note on ver. 638. of the present Book. Marchetti has successfully followed our poet with a literal version:

Nor touch develop'd, the main roads belief
Treads to the breast, and temple of the mind.
Yet will I strive; facts, haply, shall themselves
Aid me, and thou the world's vast fabric own
By dread convulsions shortly must be shook.
May fortune's smile this hour from us avert!
And truth, not feeling, the tremendous roar
Teach, with which all to ruin then shall rush!
Yet on this theme before the muse unlock
Her mystic treasures, sager and more true
Than e'er the Pythian maid, with laurels crown'd,
Spoke from the tripod at Apollo's shrine,—
Some salutary precepts would I add,
Lest, chain'd by superstition, thou should'st deem
Heaven, earth, and ocean, sun, moon, stars exist
Gods in their frame, and of eternal date,

——ondi munita
S'apre il varco la fede, e può sicure
Del cor guidarle, *e della mente al tempio.*

Ver. 110. ——*facts, haply, shall themselves*
Aid me,——] The facts he alludes to, are the actual phænomena of nature, to which he largely appeals in the prosecution of the Book before us, and on which he establishes the doctrine, as well of the origin as of the destruction of the world. Creech, absurdly enough, conceives he alludes to this destruction itself. His words are these:

And yet I'll sing; perchance *the following fall*
Will prove my words, and shew 'tis reason all.

Ver. 118. *Than e'er the* Pythian *maid, with laurels crown'd,*] Copied, as is frequently the manner of our poet, from Book I. v. 796. See Note on Book IV. v. 1. as to the custom here adopted.

Ver. 122. *Heaven, earth, and ocean, sun, moon, stars exist*
Gods in their frame, and of eternal date,] I have already observed, that by far the greater body of the Grecian philosophers contended for the immortality of the world; and there were none of those who thus contended, but believed it to be inherently possessed of a vital and rational soul, either radiating uniformly from the common centre of the universe, or separated and divided amidst the earth and the

Proptereaque putes, ritu par esse Gigantum
Pendere eos pœnas inmani pro scelere omneis,
Quei ratione suâ disturbent mœnia mundi,
Præclarumque velint cœli restinguere solem,
Inmortalia mortali sermone notantes:
Quæ procul usque adeo divino a numine distent,
Inque deûm numero quæ sint indigna videri;
Notitiam potius præbere ut posse putentur,
Quid sit vitali motu, sensuque, remotum.

Quippe et enim non est, cum quo vis corpore ut esse
Posse animi natura putetur, consiliumque:
Sic, ut in æthere non arbor, non æquore salso

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planets. Of the former opinion were Pythagoras, Trismegistus, Plato, and Aristotle: and they judged, that such a tenet was necessary in order to account for the admirable harmony and connexion of the different parts of the comprehensive whole. Thus, says Cicero, in delivering the creed of Plato, Academ. Quæst. lib. i. "The several members of the world, and all things contained in them, are upheld together by a sensitive nature, which possesses also the endowment of perfect reason. This sensitive nature is, moreover, sempiternal; for there is nothing stronger than itself, and by the power of which it can possibly be dissolved: and its denomination with us is the soul of the world."

And that Cicero reports the Platonic creed upon this subject fairly, we know from the following, as well as other accordant passages of Plato himself, in which he represents the earth, and every other planet, as possest of a rational soul;—as a perfect animal composed of perfect parts: as a god possessing the full fruition of felicity. Ζωον τελειον εκ τελειων των μερων —Ευδαι μονα θειον αυτον εγενεσατο. Tim. p. 32. 34. ed. H. Steph.

The soul of the world, upon the system of Plato, resided principally in the centre of the material universe: Chalcidius, however, conceived its head-quarters to be established in the sun; but Cicero himself differed from each of these opinions, and maintained, with the Stoics in general, that every one of the celestial bodies, endowed with motion, was equally to be ranked in the number of the gods. Thus Lucilius, quoted by Cicero as delivering the sentiments of their common school: "Hanc igitur in stellis constantiam, hanc tantam in tam variis casibus, in æternitate convenientiam temporum, non possum intelligere, sine mente, ratione, consilio. Quæ cum in sideribus esse videamus, non possumus ea ipsa in deorum numero non ponere." De Nat. Deor. l. iii. "This constancy of the stars, this harmony which prevails amongst them, under such variety of circum-

And fear for those the vengeance that pursu'd
The race gigantic, who, with letter'd lore,
Shake the world's walls, the radiant eye of heaven
Quench, and th' immortals sketch in mortal terms.
For these, so far from arrogating, proud,
Celestial honours, and the rank of gods,
Full proof exhibit, rather, how devoid
Of vital action matter may exist,
And that not every compound frame alike
Boasts the high powers of intellect and mind.
Trees not in ether, not in ocean clouds,
Nor in the fields can fishes e'er exist;
Nor blood in planks, nor vital juice in stones;

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stances, throughout the eternal duration of time, I cannot possibly conceive to exist, without a mind, without reason, without consultation. And since we behold these properties in the stars, we cannot do otherwise than place them in the number of the gods." The opinions of most of the ancient schools of philosophy, excepting that of Epicurus, exhibit a strange intermixture of speculative theism combined with popular mythology.

Ver. 124. *And fear for those the vengeance that pursu'd*
The race gigantic,——] The story is known to every one: and hence Pope, in his Essay on Man:

Oh sons of earth! attempt ye still to rise
By mountains pil'd on mountains to the skies?
Heaven still with laughter the vain toil surveys,
And buries madmen in the heaps they raise.
Ep. iv.

Ver. 127. *—th' immortals sketch in mortal terms.*] The same species of verbal alliteration occurs in Book III. v. 895. to the Note on which verse I refer the reader:

When death immortal claims his mortal life.

The original appears in v. 122. and is to this effect:

Inmortalia mortali sermone notantes.

Mr. Wakefield cites, with much pertinence, on this passage, a similar figure from Paulinus:

Nunc cœptum repetamus iter: *mortalia* dicat
Pagina mortalis: Dominum divina loquatur.
Joan. Bapt. 177.

The path resume we; let the *mortal page*
Things mortal treat; things sacred, the divine.

Ver. 134. *Trees not in ether, not in ocean clouds,*] We have here an instance of an alliteration of a different species, and which in the Note on Book IV. v. 1. I have denominated, *periodic*. The present, and eleven ensuing verses are copied from Book III. v. 798. and following.

Nubes esse queunt, neque pisces vivere in arvis;
Nec cruor in lignis, neque saxis sucus, inesse:
Certum, ac dispositum est, ubi quidquid crescat, et insit:
Sic animi natura nequit sine corpore oriri
Sola, neque a nervis et sanguine longius esse.
Quod si posset enim, multo prius ipsa animi vis
In capite, aut humeris, aut imis calcibus, esse
Posset, et innasci quâ vis in parte soleret:
Quamde in eodem homine atque in eodem vase manere.
Quod quoniam nostro quoque constat corpore certum;
Dispositumque videtur, ubi esse, et crescere, possit
Seorsum anima, atque animus; tanto magis inficiandum,
Totum posse extra corpus, formamque animalem,
Putribus in glebis terrarum, aut solis in igni,
Aut in aquâ durare, aut altis ætheris oris.
Haud igitur constant divino prædita sensu,
Quandoquidem nequeunt vitaliter esse animata.
Illud item non est ut possis credere, sedes
Esse deûm sanctas in mundi partibus ullis:
Tenuis enim natura deûm, longeque remota

Ver. 147. *In putrid glebes of earth,*——] In the Latin text, thus:

Putribus in glebis terrarum—— Ver. 143.

The same image occurs in Virgil:

—— gelidus canis cum montibus humor
Liquitur, et Zephyro *putris* se *gleba* resolvit.
Georg. i. 44.

When o'er the mountain melts the gelid snow
And zephyr frees the *putrid glebe* below.

Ver. 153. *For their immortal nature, far remov'd*] The creed of Epicurus, as I have before observed repeatedly, (see the prefixed Life of Lucretius, and Note on Book I. v. 57. to the latter of which I more

But all springs definite in scenes defin'd.
So in the bosom lives, and there alone,
Mixt with its blood and nerves, the secret mind.
There only lives; for, could it roam at all,
Then rather should we through the body's self,
The heel or shoulder, or where else it chose,
Oft trace it wand'ring than forlorn abroad.
Since, e'en in body then, the soul and mind
Are fixt thus definite, we amply prove
That out of body, and a reasoning frame,
In putrid glebes of earth, or solar fire,
In air, or water, sense can never dwell.
And hence these ne'er divinity can boast,
Since e'en devoid of animated life.

Nor deem the sacred mansions of the gods
O'er aught extend of this material frame:
For their immortal nature, far remov'd

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particularly refer the reader,) admits the existence of an order of angelic intelligences, possessed of powers and felicity far superior to mankind, and infinitely removed from all possible want. But it denies that such were ever the creators of the world, or have any ambition to be thought so. The refined vehicle that constitutes their frame, has little or no common property with matter; and, on this account, they can never become objects of corporeal perception. From themselves, however, as well as from material substances, effluences, inconceivably attenuate, are perpetually emanating; and although the organ of external vision can never descry such effluences, yet, in deep abstraction and solitude, the mind, concentrated into itself, may occasionally be sensible to their impulse as they permeate, without

Sensibus ab nostris, animi vix mente videtur.
Quæ quoniam manuum tactum subfugit et ictum,
Tactile nihil nobis quod sit, contingere debet:
Tangere enim non quit, si tangi non licet ipsum.

obstruction, the porous body that surrounds it. It will hereby acquire some slender knowledge of the purified essence of these immortal spirits, and imbibe some portion of their tranquillity and happiness. Epicurus was much accustomed to these solitary seclusions, and attributed no small portion of the habitual calmness he enjoyed to their influence. There is a considerable degree of resemblance between these mental abstractions of the Epicureans, and those of the modern Quakers: and each, in consequence of such habitual retirement from the world, such quietism and banishment from their own passions, and meditation on superior and beatified spirits, have been remarkable for the undeviating serenity of their tempers: a serenity that, even upon their return to active life, is seldom materially disturbed by any of the chances or changes that occur around them. See farther on this subject Note on Book VI. v. 78.

Mr. Wakefield, upon the passage now under consideration, has cited a paragraph from Nazarius so highly pertinent and illustrative, that I cannot restrain myself from inserting it. Paneg. Const. Ang. xiv. 2. "Et quamvis *cælestia* sub oculos hominum venire non soleant, quod crassam et caligantem aciem simplex illa et inconcreta substantia *naturæ* tenuis eludat; illi tamen auxiliatores tui, adspici audirique patientes, ubi meritum tuum testificati sunt, mortalis visus contagium refugerunt." "And although the immortals are not accustomed to be descried by the eyes of men, since the simple and uncompounded substance of their *attenuate nature* must necessarily elude an organ so dull and gross; yet, notwithstanding they thus avoid the contact of human vision, they, nevertheless, when they are witnesses of thy good deeds, suffer themselves to be both heard and perceived, and assist thee in thy actions."

The belief of Empedocles does not appear to have been very different from that of Epicurus, if we may judge from the following fragment of his Poem, "On the Nature of Things, and the Four Elements:

Ουτι γαρ ανδρομεη κεφαλη κατα γυια κεκασται,
Ου μεν απαι νωτων γε δυω κλαδοι αϊσσουσιν,
Ου ποδες, ου δοα γουν, ου μηδεα λαχνηεντα,
Αλλα Φρην ιερη, και αϋεσφατος επλετο μουνον,
Φροντισι κοσμον απαντα καταϊσσουσα θοησι.

Human the semblance that their frames evince:
Yet not with arms twin-branching from the trunk,
Or feet, or legs alert, or sexual powers;
But unity ineffable, a mind
Heaven-born, and rais'd above the cares of earth.

Ver. 155. ——*the mind's pure spirit*—] This forcible and energetic expression is not unfrequently employed by Lucretius, and is already commented upon in Note on Book IV. v. 774. It gives us the full idea of the mind concentrated within itself; or converging all its lines of radiation towards one focus, to be able more accurately to determine on an object presented to its notice. In the sacred Scriptures we occasionally meet with the very same phrascology.

Ver. 158. ——*for whate'er exists*
Intangible, itself can never touch.] It is on this account, that Plato, Spinosa, and Dr. Priestley,

From human sense, from matter gross and dull,
Scarce by the mind's pure spirit can be trac'd. 155
Hence, as no touch of matter these can reach,
Their finer textures never can impress
Material objects, for whate'er exists
Intangible, itself can never touch.

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have all thought it necessary to suppose the Creator himself possessed of some portion of matter in his essence. The last, indeed, in the very words of Lucretius, has expressly declared, that without some such possession of matter, he cannot conceive of any mode by which the Deity can operate on the material world. Upon this subject, see the prefixed Life of Lucretius, and its Appendix.

On the system of Des Cartes, it must be confessed, that matter and spirit are, in every quality and property, necessarily opposite to each other, and can have no possible connexion or reciprocal influence. But the more we analyze matter, the more it eludes us, till, at last, we find ourselves totally ignorant of the nature of its substance. Of spirit, again, no man pretends to know any thing: and, for aught we are acquainted with to the contrary, their substances may be one and the same. But allowing them to be different entities, why suppose it impossible for them to co-exist and confederate? Spirit, indeed, even admitting of a distinction, is a term which we never can employ otherwise than negatively, to express some kind of essence that is not matter. Yet, for any thing we know to the contrary, there may be ten thousand different essences existing, which are all equally different both from matter, and from each other, and yet equally made subservient, by the benevolent Divinity, to the purposes of life and happiness. In this case, the term spirit will apply to all the various substrata of being, except that of matter alone. For what reason are we then to suppose, that all these must necessarily be diametrically hostile, and in opposition to matter? And for what reason, again, are we to suppose, that the essence of the Supreme Being himself, in order to give him a power of operating upon any of them, must necessarily partake of the substance upon which he operates? Is it not much more rational, as well as much more sublime, to conceive, that whatever be the number of substances he has created for the beneficent purposes of life and happiness, even though, as I have before observed, they should amount to ten thousand, his own essence is equally different from all of them? The sun is perpetually pouring forth a flood of light, in variously coloured rays, from its own body: but must the body of the sun be hence necessarily violet, indigo, blue, or some other tincture discoverable by the solar prism? or even a tincture derivable from an intermixture of the whole? No astronomer supposes that it is so: no one, in reality, supposes that, although heat and light are continually issuing from it, the substance of the sun is one uniform mass of heat and light itself. In like manner, with the permission of comparing small things with great, we may conceive a flood of life and happiness to be perpetually emanating from the Deity in a vast diversity of vehicles. Matter we may denominate one of these vehicles; spirit, if applied to a single substance, a second; and thus there may be ten thousand others of which we can form no conception. But it is no more necessary that the Deity himself should be compounded either of matter or spirit, still using this latter term as an individual vehicle or substratum, or of any other vehicle that issues from his own essence, or even of the whole together, than that the sun should be compounded of any individual prismatic hue, or of the whole conjunctively.

That Epicurus admitted the existence of a Supreme Power, I have already noticed, and shall have occa-

Quâ re etiam sedes quoque nostris sedibus esse
Dissimiles debent; tenues, de corpore eorum.
Quæ tibi posterius largo sermone probabo.
Dicere porro, hominum caussâ voluisse parare
Præclaram mundi naturam, proptereaque
Adlaudabile opus divôm laudare decere,
Æternumque putare atque inmortale futurum;
Nec fas esse, deûm quod sit ratione vetustâ
Gentibus humanis fundatum perpetuo ævo,
Solicitare suis ullâ vi ex sedibus umquam,
Nec verbis vexare, et ab imo evortere summâ:
Cætera de genere hoc adfingere, et addere, Memmi!
Desipere est; quid enim inmortalibus, atque beatis,
Gratia nostra queat largirier emolumenti,
Ut nostrâ quidquam caussâ gerere adgredientur?
Quidve novi potuit tanto post, ante quietos,
Inlicere, ut cuperent vitam mutare priorem?
Nam gaudere novis rebus debere videtur,
Quoi veteres obsunt: sed, quoi nihil adcidit ægri
Tempore in ante acto, quom pulchre degeret ævom,
Quid potuit novitatis amorem adcendere tali?

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sion to notice still farther, in the prosecution of the Book before us; but it should be observed, to his credit, that it does not appear, from any thing in the present poem, or from any remains of his own writings, that he ever attempted, in the remotest manner, to advance any opinion upon his mysterious essence. The order of intelligences, of whom Lucretius is speaking, in the passage before us, are not creators

And, thus, th' immortal regions must from ours
Wide vary, congruous to their purer frames:
As soon the muse in ampler verse shall prove.
T' assert moreo'er the gods for mortal man
Rear'd this vast fabric, and that duty, hence,
Bids us extol the workmanship divine,
Deem it immortal, and of deathless date,
And that most impious is it to arraign
Aught thus constructed by the gods themselves
From earliest time, for man's perpetual use;
Most impious, though in words alone, to shake
The world's firm basis,—such conceits to feign,
To talk thus idly, Memmius, is to rave.
For what vast gain can e'er th' immortal powers,
Blest in themselves, from human praise derive
To rouse them in our favour? what new hope,
Such ages after of unsullied peace,
Could tempt them once to linger for a change?
New scenes to welcome, joyless proves the past:
But where no ill can rise, where every hour,
Age after age, propitious still must glide,
How can the breast here burn for what is new?

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of the Universe, and are no more participants in the essence of the Deity himself than mankind. They are immortal, and possessed of superior powers of enjoyment: and in this respect they may properly be entitled gods: but they rather formed the world, nor can they, from their own nature, or consistently with their own undisturbed felicity, interfere with its concern

An, credo, in tenebris vita ac mœrore jacebat,
Donec diluxit rerum genitalis origo?
Quidve mali fuerat nobis non esse creatis?
Natus enim debet quiquomque est, velle manere
In vitâ, donec retinebit blanda voluptas:
Qui numquam vero vitæ gustavit amorem,
Nec fuit in numero; quid obest non esse creatum?

Exemplum porro gignundis rebus, et ipsa
Notities hominum diis unde est insita primum,
Quid vellent facere, ut scirent, animoque viderent?
Quove modo est umquam vis cognita principiorum,
Quidque inter sese permutato ordine possent,
Si non ipsa dedit specimen Natura creandi?
Namque ita, multimodis, multis primordia rerum
Ex infinito jam tempore percita plagis,
Ponderibusque suis consuerunt concita ferri,
Omnimodisque coire, atque omnia pertentare,
Quæquomque inter se possint congressa creare;

Ver. 181. *How can the breast here burn for what is new?*] The same species of argument, though advanced with a different object, we meet with in Cicero De Nat. Deor. l. ii. "Quid autem erat, quod conspiceret Deus mundum signis et luminibus, tanquam ædilis, ornare? Si, ut Deus ipse melius habitaret, antea, videlicet tempore infinito, in tenebris, tanquam in gurgustio habitaverat? Post autem, varietate ne eum delectari putamus, quod cœlum et terras exornatas videmus? Quæ ista potest esse oblectatio Deo? quæ si esset, non eâ tamdiu carere potuisset." "Whence springs it, that God should be so desirous of embellishing the world with luminaries and constellations like the gaudy dress of

Dragg'd they their lives in darkness, then, and woe
Till sprang th' illumin'd world? or, if ne'er born,
What cause could man have marshall'd for complaint?
Born, it behoves him, doubtless, to remain
In life while life one blessing can afford;
But what of vital joy ne'er tasted, ne'er
Rank'd with the living, how can such object,
And with what reason, that it ne'er was form'd?
Whence could the gods the model, too, deduce
Of things create, the portraiture of man?
Or in their minds how first the notion spring?
Whence, too, the powers of atoms could they learn,
Changing their act as in position chang'd,
If nature ne'er the visual world had rear'd?
Atoms innum'rous, that, in countless modes,
From time eternal have been so convuls'd
By repercussions, by intrinsic weight
So urg'd and alter'd, and, in every form
Combin'd, evincing still some action new,
In every mass some effort to create,

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a beadle? Was it, that having heretofore existed from all eternity in a den of darkness, he now became anxious to exist more comfortably? Or can we conceive that, for the sake of variety alone, he at length decorated the heavens and the earth? But what delight could such a change afford to God? for, if it could afford him any, he would not so long have been without it."

Ver. 187. ——*of vital joy ne'er tasted,*—] In the original, thus, ver. 180.

Qui numquam vero vitæ gustavit amorem.

Mr. Wakefield, with his accustomed readiness, cites upon this verse a similar figure in St. Matthew, cap. xvi. 28. ὡς τινες ου μη ΓΕΥΣΩΝΤΑΙ ΘΑΝΑΤΟΥ, "some are standing here, who shall not *taste of death*."

Ut non sit mirum si in taleis disposituras
Deciderunt quoque, et in taleis venere meatus,
Qualibus hæc rerum geritur nunc summa novando.
  Quod, si jam rerum ignorem primordia quæ sint,
Hoc tamen ex ipsis cœli rationibus ausim
Confirmare, aliisque ex rebus reddere multis;
Nequaquam nobis divinitus esse paratam
Naturam rerum; tantâ stat prædita culpâ.
  Principio, quantum cœli tegit inpetus ingens,
Inde avidam partem montes, sylvæque ferarum,
Possedere; tenent rupes, vastæque paludes,
Et mare, quod late terrarum distinet oras.

Ver. 205. *E'en though the rise of things I ne'er could prove,*] This, and the three succeeding verses, are repeated from Book II. 182, and following; to which, and the annotation that accompanies them, I refer the reader, if he wish for explanation.

The existence of moral and physical evil, upon the consideration of which our poet is now entering, is a difficulty of immense magnitude upon every system. If matter, as to its essence, were created by the Deity from nothing, why was it not created exempt from the evils it is perpetually exhibiting? Or, if this be impossible from the nature of matter itself, why was not some other substance, or mode of being, selected in preference to matter, and devoid of its imperfections? Independently, therefore, of the difficulty which is pretended to be attached to the idea that any thing can spring from nothing, it is not improbable that Epicurus, as well as many other Grecian philosophers, were also influenced by such additional considerations, in contending that matter was eternal: in doing which, they also necessarily admitted that the Deity himself could not abrogate the defects to which it is inherently subject: and of course is not accountable for the evils it evinces. Of these evils our poet is now proceeding to point out a variety, and consecutively to demonstrate the truth of the Epicurean doctrine, that the material basis or substratum is not of divine origin; in the words of the poem itself, that

No power divine this mass material rear'd.

Polignac has noticed the present passage and much that follows, at full length, and with a view of answering the objections advanced. The imitation, which is obvious, commences at lib. ix. 510.

Si bonus est Deus, omnipotens si cuncta gubernat, &c.

The whole passage is too long to be copied; and the reply, which it is designed to offer, is by no means satisfactory, though generally plausible and ingenious. The author himself, indeed, is not perfectly contented with his own arguments, and hence concludes with referring us, for ampler information, to a state of futurity.

That nought stupendous seems it they, at length,
Should gain those stations, those connexions gain,
Whence sprang th' Entire of all things, and subsists.
E'en though the rise of things I ne'er could prove,
Yet dare I, from the heaven's defective frame,
And many a scene alike perverse, affirm
No power divine this mass material rear'd
With ills so gross, so palpable to sight.
First, all beneath th' etherial cope's wide whirl
What hills rapacious rise! what woods beset
With tribes ferocious! what uncultur'd rocks!
How stretch the stagnant lakes, of life devoid,
And the vast main that severs shore from shore!

Clamat—auctorem *natura*, opus undique summum
Arguit artificem: mens, abdita corpore, cernit
Nunc opus, artificem, *mox corpore* libera, cernet.
Anti-Lucr. ix. 635.

All nature speaks its author; the vast work
Proves the vast workman. In the body hid,
The work, the workman now the mind perceives,
But soon, releas'd, more clearly.

Ver. 210. *First, all beneath th' etherial cope's wide whirl*] In the original, there is a beauty and sublimity of description which has never been surpassed by any poet, ver. 201.

Principio, quantum cœli tegit impetus ingens,
Inde avidam partem montes, sylvæque ferarum,
Possedere, &c.

The passage, however, has been uniformly mistaken in all the translations I have met with. The interpretation of Creech is that of the rest:

For first those tracts of air what creatures fill?
Why beasts in every grove, and shady hill?

Lucretius makes no mention of creatures filling the air: his obvious meaning is "as widely as the mighty whirl of the heavens spreads its covering, so widely are beasts of prey found in woods and mountains, &c."

Ver. 211. *What hills rapacious*] As though discontented with their own portion of the earth, they wished to seize on all that surrounded them. The metaphor is truly daring and sublime.

The entire passage is thus imitated by Young:

A part how small of the terraqueous globe
Is tenanted by man! the rest a waste,
Rocks, desarts, frozen seas, and burning sands!
Wild haunts of monsters, poisons, stings, and death.
Such is earth's melancholy map! but, far
More sad! this earth is a true map of man.
So bounded are its haughty lord's delights
To woe's wide empire; where deep troubles toss,
Loud sorrows howl, invenom'd passions bite,
Rav'nous calamities our vitals seize,
And threatning fate wide-opens to devour.
Night Thoughts, i.

Inde duas porro prope parteis fervidus ardor,
Adsiduusque geli casus, mortalibus aufert.
Quod super est arvi, tamen id natura suâ vi
Sentibus obducat, ni vis humana resistat,
Vitaï caussâ, valido consueta bidenti
Ingemere, et terram pressis proscindere aratris:
Si non, fecundas vortentes vomere glebas,
Terraïque solum subigentes, cimus ad ortus;
Sponte suâ nequeant liquidas exsistere in auras.
Et tamen, interdum magno quæsita labore,
Quom jam per terras frundent atque omnia florent;
Aut nimiis torret fervoribus ætherius sol,
Aut subitei perimunt imbres, gelidæque pruinæ,
Flabraque ventorum violento turbine vexant.
Præterea, genus horriferum Natura ferarum,
Humanæ genti infestum, terrâque marique,
Quur alit, atque auget? quur anni tempora morbos
Adportant? quâ re Mors inmatura vagatur?

Tum porro puer, ut sævis projectus ab undis
Navita, nudus, humi jacet, infans, indigus omni

Ver. 234. *Then the poor babe, too, like a sea-man wreck'd*] Thus Apuleius, Met. i. p. 50, closely following the footsteps of our poet: "At ego, ut eram, etiam nunc humi projectus, inanimus, nudus, et frigidus, et lotio perlutus, quasi recens utero matris editus, imo vero semimortuus." "And now am I once more cast on the ground, inanimate, naked, and cold, and drenched with wet, as the new-born child thrown half-dead from the womb of its mother." A passage, perfectly similar, is deduced by Lambinus from Pliny, Nat. Hist. vii. at the beginning, to which the reader may turn at his lei-

Then torrid heat, too, and perpetual frost
Shut from mankind near half the solid earth:
While what of glebe remains, from power innate
So throngs with briars, human art can scarce
The growth restrain; by love of life led on
O'er the tough spade, or delving plough to groan:
For if the share we thrust not through the soil,
Subjecting earth, and rearing for ourselves
The stores demanded, birth were never theirs.
Yet e'en, at times, when, sought by long fatigue,
With flowers and foliage laughs the total scene,
Th' etherial sun with rage untemper'd burns,
Or showers abrupt destroy, or biting frosts,
Or the wild winds with winnow too severe.
And why, moreo'er, in ocean, or on earth,
Does nature nourish, and the tribes augment
Of savage brutes and monsters? why renew
Diseases with the seasons? and with deaths
Green and untimely thin the race of man?
Then the poor babe, too, like a sea-man wreck'd
Thrown from the waves, lies naked o'er the ground,

---

sure. The prophet Ezekiel has also a description so strikingly accordant, that I cannot avoid quoting it, ch. xvi. 4. 5.

In the day of thy birth thou wast not washed—
Thou wast not swaddled at all.
No eye pitied thee thus to help thee,
Thus to have compassion upon thee;
But thou wast cast out into the open field,
To the loathing of thy person,
In the day in which thou wast born.

Ver. 235. ——*like a sea-man wreck'd*
Thrown from the waves, lies naked——] To

Vitali auxilio; quom primum in luminis oras
Nixibus ex alvo matris Natura profudit:
Vagituque locum lugubri conplet, ut æquum est,
Quoi tantum in vitâ restet transire malorum.
At variæ crescunt pecudes, armenta, feræque:
Nec crepitacillis opus est, nec quoiquam adhibenda est
Almæ nutricis blanda, atque infracta, loquela;
Nec varias quærunt vesteis pro tempore cœli:
Denique, non armis opus est, non mœnibus altis,
Quei sua tutentur; quando omnibus omnia large
Tellus ipsa parit, Naturaque dædala rerum.

Principio, quoniam terraï corpus, et humor,
Aurarumque leves animæ, calideique vapores,

---

which description Creech, but without any authority from his author, most *elegantly* adds, "besmeared with blood."

Like a poor carcase, tumbled by the flood,
He falls all naked, and besmear'd with blood.

Ver. 241. *While herds, meantime, and beasts of various name,*
Flourish at ease——;] Thus the Abbé Saint Pierre, adverting to this very passage of our poet: "Il faut qu'il se detourne de cette perspective des maux que la nature lui presente de toutes parts. A quels travaux n'a-t-elle pas assujetti sa miserable vie? Les animaux sont mille fois plus heureux; vêtus, logés, nourris par la nature, ils se livrent sans inquietude à leurs passions, et ils finissent leur carriere sans prevoir la mort, et sans craindre les enfers."

To these parallel extracts I must intreat the indulgence of my readers, to adjoin the following from Lambinus de Opif. Dei. cap. 3. The intrinsic elegance and purity of the passage entitle it to this attention. "Quæruntur, hominem nimis imbecillum et fragilem nasci, quam cætera animalia nascuntur; quæ ut sunt edita ex utero, protinus in pedes suos erigi, et gestire discursibus; statimque aeri tolerando idonea esse, quod in lucem naturalibus indumentis munita processerint; hominem contra, *nudum et inermem, tanquam ex naufragio in hujus* vitæ miserias projici, et expelli; qui neque movere se loco, ubi *effusus* est, possit, nec alimentum lactis appetere, nec injuriam temporis ferre: itaque naturam, non matrem esse humani generis, sed novercam; quæ cum mutis tam liberaliter se gesserit, hominem vero sic *effuderit, ut inops, et infirmus et omni auxilio indigens, nihil aliud possit, quam fragilitatis suæ conditionem ploratu ac fletibus suis ominari;* scilicet,

"Cui tantum in vitâ restet transire malorum."

"They ask, why man is born more feeble and help-

Weakly and void of every vital aid,
When nature first, amid his mother's pangs,
Casts the young burden on the realms of light;
And leaves to pine full sore, as well he may,
That e'er the suffering lot of life were his.
While herds, meantime, and beasts of various name,
Flourish at ease; no rattles they require,
No broken lullaby of dandling nurse,
Nor varying dress adapted to the day:
Nor arms they need, nor garners to protect
Their hoarded treasures, earth and nature boon
To each acceding every latent wish.
And since earth, ocean, heat's redundant stream,
And the light spirits of the gentle airs,

---

less than other animals; who, as soon as they drop from the womb, instantly find the use of their feet, and frolic about in their respective sports, prepared for the atmosphere by a protection of natural clothing. While man, on the contrary, *is thrown naked and unarmed, as from a shipwreck, into the miseries of this life;* alike unable to move himself from the spot upon which he is *cast forth*, to obtain for himself the nutriment of milk, and to defend himself from the severity of the seasons. Nature to him is not a mother, but a stepdame; since, while she opens herself thus liberally to the brutes, she *throws forth* man indigent, infirm, and *devoid of every vital aid, fit for nothing else than to brood with tears and lamentations over the lot that remains for him,*

"The store of ills that life must yet disclose."

Ver. 243. *No broken lullaby of dandling nurse,*] In the language of Dr. Downam, whose poem on *Infancy* has never received all the attention it is entitled to:

Sonorous trifles, useless, and to him
Incomprehensible: debarr'd meanwhile
From action which invigorates the frame,
And every curious sense directs to things
Momentous and substantial, understood
At once, or by spontaneous effort stampt
On the sensorium, ne'er to be eras'd. Book V.

The verse is expressed with peculiar force and beauty in the original:

Almæ nutricis blanda, atque *infrenis, lepos.*

Persius has a passage to the same effect, and possessed of equal merit:

cur non potius teneræque columbo
Et similis regum pueris, pappare minutum
Poscis, et *inani gaudere* SAT. III. 16

Go back to what thy infancy began,
Thou who wert never meant to be a man,
Eat pap, and spoon-meat, for thy *rattle* cry,
Storm, and *refuse* nurse's *lullaby.*
DRYDEN altered.

E quibus hæc rerum consistere summa videtur,
Omnia nativo ac mortali corpore constant;
Debet eâdem omnis mundi natura putari.
Quippe et enim, quorum parteis et membra videmus,
Corpore nativo, in mortalibus esse figuris,
Hæc eadem ferme mortalia cernimus esse,
Et nativa simul: quapropter maxuma mundi
Quom videam membra, ac parteis, consumpta, regigni;
Scire licet, cœli quoque item terræque fuisse
Principiale aliquod tempus, clademque futuram.
Illud in hiis rebus ne conripuisse rearis,
Memmi! quod terram, atque ignem, mortalia sumpsi
Esse; neque humorem dubitavi, aurasque, perire;
Atque eadem gigni, rursusque augescere, dixi:
Principio, pars terraï non nulla, perusta
Solibus adsiduis, multâ pulsata pedum vi,
Polveris exhalat nebulam, nubesque volanteis,
Quas validei toto dispargunt aëre ventei:
Pars etiam glebarum ad diluviem revocatur
Imbribus, et ripas radentia flumina rodunt.

Ver. 249. *And the light spirits of the gentle airs,*] In the original, thus:

Auraruinque leves animæ. Ver. 237.

I am not surprized that this delicate painting has been overlooked both by the English and French translators, who seldom appear solicitous to favour their readers with any thing of the highly beautiful and animated style of Lucretius, but merely with his philosophical tenets. But I should have been astonished indeed if the elegant and attentive pen of Marchetti had passed it over without notice; it is thus he translates it literally:

Dell' aure i lievi spirti.

Ausonius has copied it in his eighth idyl:

——da, vere salubri,
Apricas *ventorum animas:*

Whence chief the world is rear'd, of frames consist
Create and mortal, mortal and create
Must, too, the total world itself be deem'd.
For where we see the separate parts of things
Of figures form'd, now rising, now destroy'd,
There see we, too, the mass those parts compose
Must have alike an origin and end.
So, where we view the world's chief members rise,
And waste alternate, heaven and earth we hold
Erst was created and must soon decay.
Nor here, O Memmius! unconfirm'd by proof
Deem we maintain that earth, or ether pure,
Moisture or heat, are perishable all;
Reviving still, and urg'd to growth mature.
For much of earth perpetual suns to dust
Burn most impalpable; and much the tread
Of ceaseless traffic into clouds compels,
Blown by the winds o'er all the void of heaven.
While part, if glebe, the rushing rains dissolve,
Or restless tides, if form'd of bank abrupt.

——and in the healthful spring
Let the warm *spirits of the breezes* blow.

And Garcilazo de la Vega, with not less success, in his Elegies:

En quel prado allí nos reclinamos
Y *del zefiro fresco* recogiendo
El agradable espiritu, respiramos:
Here on the green repos'd we, and inhal'd
Fresh *zephyr's gentle spirit* pour'd profuse.

Ver. 268. *While part, if glebe, the rushing rains dissolve,*
Or restless tides, if form'd of bank abrupt.]
Thus in the Latin text, v. 256.

Præterea, pro parte suâ, quodquomque alid auget,
Redditur: et, quoniam dubio procul esse videtur
Omniparens eadem rerum commune sepulcrum,
Ergo terra tibi libatur, et aucta recrescit.
Quod super est, humore novo mare, flumina, funteis,
Semper abundare, et latices manare perenneis,
Nihil opus est verbis, magnus decursus aquarum
Undique declarat: sed primum, quidquid aquaï
Tollitur; in summâque fit, ut nihil humor abundet;
Partim, quod validei, verrentes æquora, ventei
Deminuunt, radiisque retexens ætherius sol:
Partim, quod subter per terras diditur omneis:
Percolatur enim virus, retroque remanat

Pars etiam glebarum ad diluviem revocatur
Imbribus, et ripas radentia flumina rodunt.

Whenever a passage more peculiarly decorated than the rest, or an image of inestimable value occurs in Lucretius, Creech is generally sure to fly over it without stopping: and yet where the language is perfectly simple and chaste, he will often endeavour to embellish it either with conceits of his own, or of some other poet. To translate the latter line of the present distich he has dragged forth the following from Cowley:

——the stream with wanton play
Kisses the smiling banks and glides away,

and has, in this manner, interwoven Cowley's description with his own version:

And gentle *rivers* too *with wanton play*
That kiss the *rocky* banks and glide away
Take somewhat still from the *ungentle stone*
Soften the parts, and make them like their own.

It is astonishing to observe the equal want of taste and accuracy of translation that occurs in these wretched lines. Cowley might tell us undoubtedly, without the least incongruity, of a "stream in wanton play kissing a *smiling* bank," and we may be pleased with the imagery; but when this same imagery comes to be applied to a *rocky* bank, all its elegance vanishes, and we pity the rough salute the playful stream must have experienced. This is the more unlucky, because the Roman bard himself does not mention, nor has he any allusion to a *rocky* bank or an *ungentle stone*, neither of which can very easily be softened or even abraded; so that the interpreter is as inaccurate as he is incongruous. *Banks*, and without any epithet, is the only term employed in the text. Added to which, the first line of the Latin couplet is totally omitted in this curious paraphrase.

Ver. 271. ——*earth*
The common parent lives, and grave of all,] Lu-

Whate'er, moreo'er, some other substance feeds
Itself must waste proportion'd; whence, since earth
The common parent lives, and grave of all,
She, too, alike must dwindle and augment.
Then that the fountains, floods, and boundless main
Swell with new waters from perpetual springs,
Words need not prove; the lavish streams that flow
Still undiminish'd, turn where'er we may,
This, of themselves, demonstrate; while above
Mounts all excess attenuate as it forms.
For part the bickering winds brush ceaseless, part
The sun exhales etherial, and through earth
Part still retreats, and, percolated pure,

---

cretius appears to have had the following distich of Æschylus in his recollection:

Καὶ Γαῖαν αὐτὴν, ἣ τὰ πάντα τίκτεται·
Θρέψασά τ', αὖθις τἀνδὲ κυμα λαμβάνει·

Choëph. 125.

This earth that all things bears, sustains, and then
Takes her own offspring to her womb again.

Thus Milton:

The womb of nature and perhaps her grave.

Par. Lost, ii. 911.

Ver. 282. *Part still retreats, and, percolated pure,*] The same idea occurs in Book II. 480. and a passage of similar purport in Seneca, Nat. Quæst. iii. 5. Upon which, Mr. Wakefield, and altogether in point, cites the following passage from the commentaries of Fromondius. Quidam judicant, terram, quidquid aquarum emisit, rursum accipere; et ob hoc maria non crescere, quia, quod influxit, non in suum vertunt, sed protinus reddunt. Occulto enim itinere subit terras, et palam venit, secreto revertitur, colaturque in transitu, mare: quod, per multiplices amfractus terrarum verberatum, amaritudinem ponit, et pravitatem saporis in tantâ soli varietate exuit, et in sinceram aquam transit. "Some conceive that the earth receives back again whatever waters it loses, and that, on this account, the seas do not augment, since whatever flows into them, converts not into their own property, but immediately returns. For the water of the sea enters the bowels of the earth by a path altogether undiscovered; it relapses secretly, and is percolated in its passage, being impelled through a multitude of tortuous apertures under the soil; whence it loses its bitterness of taste, as well as every other depravity, and, at length, bubbles forth perfectly pure and wholesome." See Note on Book VI. v. 637.

Materies humoris, et ad caput amnibus omnis
Convenit: inde super terras fluit agmine dulci,
Quâ via secta semel liquido pede detulit undas.
Aëra nunc igitur dicam, quid corpore toto
Innumerabiliter privas mutatur in horas:
Semper enim, quodquomque fluit de rebus, id omne
Aëris in magnum fertur mare; qui nisi contra
Corpora retribuat rebus, recreetque fluenteis,
Omnia jam resoluta forent, et in aëra vorsa.
Haud igitur cessat gigni de rebus, et in res
Recidere, adsidue; quoniam fluere omnia constat.
Largus item liquidi fons luminis, ætherius sol,

Ver. 285. *Its liquid feet have printed oft before.*] The original is not only so truly excellent, but so euphoniously descriptive of the sense, that any of my readers unacquainted with the Latin tongue must understand somewhat of its meaning from the fluency of the words that convey it.

Quâ via secta semel liquido pede detulit undas.

The image is closely pursued by Horace, as has been already observed by Lambinus.

Levis *crepante* lympha desilit *pede*. Epod. xvi. 48.

Leaps the light wave *with pattering foot*.

Yet Virgil is a correcter copyist still:

Castaliæque, sonans *liquido pede*, labitur unda.
Culex. 17.

With *liquid foot*, sonorous, glides along
The wave Castalian.

The image is well preserved by Marchetti, who is the only one among the translators that has paid it any attention whatever.

——che per se medesma aprirsi 'n prima
Poteo *co'l molle piè* l'onda stillante.

With a similar boldness of figure, Isaiah applies the same term *feet* to the *ships* in which the inhabitants of Tyre transported themselves to Carthage, and the islands of the Ionian and Ægean seas on the subversion of this city by Nebuchadnezzar, ch. xxiii. 7.

חלילו ישבי אי:
חזאת לכם עליזה
מימי קדם קרמתה
יבלוה רגליה מרחוק לנור:

Howl, ye inhabitants of the isle!
Is this your exulting city
Whose antiquity is of earliest days?
Her own *feet* hurry her away to a distant dwelling.

Ver. 288. ——*the vast ocean joins*
Of air sublime;]——The imagery is wonderfully bold and beautiful: the hint, however, was derived from Ennius, but is much improved upon. See Nonius, iii. 92.

Crassa polvis oritur; omnem pervolat *cæli fretum*.

Fresh bubbles distant at some fountain-head:
Whence winds again the dulcet tide through paths
Its liquid feet have printed oft before.
To air now turn we, varying every hour
In every mode: for all that pours profuse
From things perpetual, the vast ocean joins
Of air sublime; which if to things again
Paid not, thus balancing the loss sustain'd,
All into air would dissipate and die.
Hence, born from things, to things air still returns
Ceaseless, as prove their fluctuating forms.
Then, too, th' etherial sun, exhaustless fount

In Lucretius it runs thus: 277.

Aëris in magnum fertur *mare*.

This audacious catachresis has been imitated repeatedly, and in a variety of different languages. Thus, Klopstock:

Ich, ein kurzer gedanke des Unerschaffnen, ein tropfen
In der *schöpfungen meer*. MESSIAS, v.

I, but a transient thought of the Supreme,
A *drop* alone in *being's boundless sea*.

But our own countrymen have been more attached to it than any other. Thus Shakespeare:

——the *sea of air*.

So Cowper, addressing himself to the heavenly constellations:

——Tell me ye shining hosts
That navigate a *sea* that knows no storms.
TASK, v.

So, Gray, in a still ampler description:

Sailing with supreme dominion
Through the azure *deep of air*. PROG. of POES.

Cowley has confessedly copied from our poet. and as Lucretius has audaciously applied the term *ocean* to the sky, he was determined to be even with him, and has therefore, at the same time, and with a converse figure, applied the term *sky* to the *ocean*. The rhetorical artifice is here, however, too easily discoverable, and the poet appears rather a hunter after metaphors, than a minstrel hurried away involuntarily by the force of a sublime imagination. It occurs in his ode, entitled The Muse:

Where never *fish did fly*
And with short silver *wings cut the low liquid sky*;
Where *bird with painted oars* did ne'er
Row through the trackless *ocean* of the air.

Ver. 294. *Then, too, th' etherial sun, exhaustless fount*
Of liquid light, all heaven with flame bedews.]

The passage in the original, is, perhaps, altogether unrivalled:

Largus item liquidi fons luminis, ætherius sol,
Inrigat adsidue cœlum candore recenti,
Subpeditatque novo confestim lumine lumen

Inrigat adsidue cœlum candore recenti,
Subpeditatque novo confestim lumine lumen.
Nam, primum quidquid fulgoris disperit ei,
Quoquomque adcidit: id licet hinc cognoscere possis;
Quod, simul ac primum nubes subcedere soli
Cœpere, et radios inter quasi rumpere lucis;
Ex templo inferior pars horum disperit omnis,
Terraque inumbratur, quâ nimbei quomque ferantur;
Ut noscas splendore novo res semper egere,
Et primum jactum fulgoris quemque perire:
Nec ratione aliâ res posse in sole videri,
Perpetuo ni subpeditet lucis caput ipsum.
Quin etiam nocturna tibi, terrestria quæ sunt,
Lumina, pendentes lychnei, claræque coruscis

Polignac has thus discovered his recollection of it:

Aspice suspensum sublimi e fornice solem,
A primâ jussum nascentis origine mundi,
Ætheris immensi diffusa per æquora, lucem
Subjectis quoquo versus dispergere terris:
Ille quidem ignivomâ radios fornace liquentes,
Vibrat, inexhaustus, vas admirabile.

Anti-Lucr. V. 695.

See, mid this vault sublime, the balanc'd sun,
From nature's first creation punctual doom'd
O'er the subjected earth his radiant beams
Through ether's marble realms to *pour* profuse.
Vast, wondrous urn! his tide of *liquid light*
For ever brandishing from founts of fire.

Milton, on a variety of occasions, has paid a due attention to the excellencies of this figure. Thus, in his address to light:

Or hear'st thou rather, *pure etherial stream*,
Whose *fountain* who shall tell?—Par. Lost, iii. 7.

And again, in the same poem:

——the sun's orb, made porous to receive,
And drink the *liquid light*:——
Hither, *as to their fountain*, other stars
Repairing, in ther *golden urns draw light*.

Par. Lost, vii. 361.

The following passage from Klopstock, is by no means inapposite; it may agreeably be compared either with Lucretius or Milton; with the former quotation of the English bard more particularly: there is a grandeur and sublimity in it, which has, perhaps, never been excelled:

Mitten in der versammlung der sonnen erhebt sich der Himmel,
Rund, unermesslich des weltgebäus urbild, die fülle
Jeder sichtbaren schönheit, die sich, gleich flüchtigen bächen,
Ringsum durch den unendlichen raum nachahmend ergiesset.

Messias i.

Of liquid light, all heaven with flame bedews,
And pours o'er lustre lustre ever new.
For, fall where'er it may, th' impinging beam
Dies in the contest instant. This full clear
See we, whene'er by interposing clouds,
The solar disc is blotted, and its rays
Fractur'd abrupt; for the bright stream below
Then fades, and all the sick'ning scene is shade.
Hence may'st thou learn that things for ever claim
New radiance, and that every wave propell'd
Wastes instantaneous—while alone survives
Perpetual shine from rays perpetual pour'd.
So from our earthly lights, too, trimm'd at eve,
The pendant lamp, the taper, or the torch

There rises Heaven mid congregated suns,
Round, and immense, bright model of the world;
Well-spring of every beauty trac'd by sight,
Forth-flowing endless, through the realms of space.

Mr. Wakefield, upon this admirable specimen of imagery in Lucretius, adduces one of even additional audacity in Pindar: the reader will readily allow me to copy it:

——ἐν ξανθαισι και παμποίκιλοι:
Ακτισι θεόριγμος ἀὼρον
Σωμα. Olymp. vi. 92.

While all *the bright purpureal rays*
The fragrant violet displays,
His frame *bedews*.

I cannot close this note, without testifying the ample justice which our poet has received from the hands of Marchetti:

Ma de' liquidi raggi il largo fonte
Di recente candor mai sempre irriga
Le stelle, e l' etra, e gli elementi, e ratto
Ministra al ciel con novo lume il lume.

Ver. 295. —*liquid light, all heaven with flame bedews*,] Hence, doubtless, Gray:

And *float* amid the *liquid noon*.

Ode on Spring.

Ver. 297. ——*th' impinging beam*
Dies in the contest instant.——] So Sylvester, in his version of the Days and Weeks of Du Bartas, alluding to the sportsman's fowling-piece:

—— from the touch-pan flies
A ruddy flash, that in a moment dies. i. 7.

Ver. 308. ——*the torch*
Flaring luminous through clouds of smoke,] To the same effect, Persius:

Fulguribus, pingues multâ fuligine, tedæ,
Consimili properant ratione, ardore ministro
Subpeditare novum lumen, tremere ignibus instant;
Instant, nec loca lux, inter quasi rupta, relinquit:
Usque adeo properanter ab omnibus ignibus ei
Exitium celeri celeratur origine flammæ.
Sic igitur solem, lunam, stellasque, putandum
Ex alio atque alio lucem jactare subortu,
Et primum quidquid flammarum perdere semper;
Inviolabilia hæc ne credas forte vigere.
Denique, non lapides quoque vinci cernis ab ævo?
Non altas turreis ruere, et putrescere saxa?
Non delubra deûm, simulacraque, fessa fatisci?
Nec sanctum numen fati protollere fineis
Posse, neque advorsus naturæ fœdera niti?
Denique, non monimenta virûm dilabsa videmus?
Quærere, proporro, sibi quomque senescere credas.

---

noctâque fenestrâ
Dispositæ, *pinguem nebulam* vomuere *lucernæ*.
Sat. V. 180.

Thick from each greasy window, close array'd,
Vomit the lamps their gross sulphureous cloud.

Ver. 310. *Stream new-born lustres from their several fires*
With brandish ceaseless,——] Thus, Manilius:

Fulgura cum videas, *tremulum vibrantia lumen*
Imbribus in mediis. i. 186.

As, mid the shower, the lightning thou mayst mark
Brandish its trembling lustres.

Ver. 322. *Nor can the gods resist th' impending fate;*
Or war with nature.——] He is obviously speaking of the gods of the multitude, to whom temples were every where erected: he tells the people, that in spite of the divinity of the powers that were supposed to protect them, these temples themselves must inevitably follow the common law of nature, and perish like the meanest buildings. The

Flaring bituminous through clouds of smoke,
Stream new-born lustres from their several fires
With brandish ceaseless, ceaseless or the scene
Would instant frown with discontinuous blaze.
So rapid rush they! such the headlong speed
With which the present triumphs o'er the past.
So sun, moon, stars alike are deem'd t' eject,
Birth after birth, still fresh-engender'd rays,
Glittering through time with light that never lives.

E'en seest thou not how stones themselves decay?
How turrets totter, and the rigid rock
Crumbles in time to dust? how yield, at length,
Fanes, altars, images by age worn out?
Nor can the gods resist th' impending fate,
Or war with nature. Moulder not, moreo'er,
The marble tombs of heroes? as though each
Sought, like the form it clasps, an early end.

---

gods, conceived to be present, are incapable of preventing the destruction. Creech, however, refers this verse to the gods themselves: and Des Coutures, still worse, to certain and irresistible Fate. "*La destine meme*," says he, "cette divinité respectcé, est impuissant pour etendre le cours," &c.

Ver. 324. ——*as though each*
Sought, like the form it clasps, an early end.] I read, with Mr. Wakefield, from the most ancient and incorrupt copies, ver. 313.

Quærere, proporro, sibi quomque senescere credas.

The commentators upon our poet have been generally too fastidious. Some have found him in this passage intemperately pleasant; and have proposed to banish, both the verse before us, and the ensuing, as equally spurious: of this opinion were Lambinus and Bentley. Others, again, have supposed the entire distich to have been originally written differently from the text as now cited, and have hence attempted different emendations; thus Faber:

Omniaque ut porro subitoque senescere credas.

Non ruere avolsos silices a montibus altis;
Nec validas ævi vireis perferre, patique,
Finiti? neque enim caderent avolsa repente,
Ex infinito quæ tempore pertolerassent
Omnia tormenta ætatis, privata fragore.
Denique, jam tuere hoc, circum supraque, quod omne
Continet amplexu terrarum; procreat ex se
Omnia, quod queidam memorant, recipitque perempta:
Totum nativum mortali corpore constat.
Nam, quodquomque alias ex se res auget, alitque,
Deminui debet; recreari quom recipit res.

Præterea, si nulla fuit genitalis origo
Terrarum et cœli, semperque æterna fuere;

But the more common variation is:

Cedere, proporro, subitoque senescere casu.

Both equally absurd and unnecessary. The offending verse, in its pure and unamended form, would do honour to any poet, and to any, even the most serious occasion. The Night Thoughts of Young abound with pleasantries, if so they must be called, of a similar description. The following may serve as an example:

What are our noblest ornaments, but deaths
Turn'd flatterers of life in paint or marble,
The well-stain'd canvas, or the featur'd stone?—
Not man alone—*his breathing bust expires,*
His tomb is mortal; empires die: where now
The Roman? Greek? They stalk an empty name—
The melancholy ghosts of dead renown,
Whisp'ring faint echoes of the world's applause.

Night-Thoughts, ix.

Ver. 330. *View this vast concave that above, around,*] This, and several of the ensuing verses, have an obvious aspect towards the following passage of Pacuvius, which has unfortunately reached us as a mere fragment, and of whom we know little more than is accidentally recorded of him by Cicero and Horace. This little, however, is highly to his praise. The verses I refer to, are to this effect:

Hoc vide circum, supraque, quod complexu continet
Terram; id quod nostrei *cavum cælum* memorant,
Grajei æthera.
Quidquid est hoc, omnia animat, format, alit, auget, creat,
Sepelit, recipitque in sese omnia; omniumque idem est pater:
Indidemque, eâdemque, oriuntur de integro; atque eodem obcidunt.

This *concave heaven survey, above, around*
That earth enfolds, term'd ether by the Greeks:

And rush not oft huge craggs, from mountain heights
Hurl'd headlong, powerless to resist the rage
Of finite time? for had they flourish'd firm
From time eternal, they had flourish'd still.

View this vast concave that above, around,
Folds all creation in its mighty grasp;
This whence, as some tell, all first rose, and where
All shall at last return—this too exists
Create and mortal; for whate'er augments
Aught else, and nurtures, must itself decrease,
Repair'd alone by matters re-absorb'd.
Yet grant this heaven, this earth the heaven surrounds,
Time ne'er produc'd, eternal of themselves—

Whate'er it be, tis this that all inspires,
Forms, feeds, augments, creates, and to itself
Takes back, the parent and the grave of all:
Hence all re-issues, and here all returns.

It is probable, however, that the first hint of both the above passages was derived from Ennius, who was a near relation of Pacuvius, and generally reported to have been his uncle.

Vides, sublime fusum, immoderatum, æthera,
Qui terram tenero circumjectu amplectitur.

See, o'er our heads, this ether pour'd immense
That earth embosoms in its soft embrace.

This couplet is to be met with in Cicero. De Nat. Deor. ii. 25. It is commonly ascribed to Ennius, but suspected by some critics to be a version by the Roman orator himself from a passage, now no longer known, of Euripides. The text of Cicero runs differently in different editions; if that of Gronovius be correct, the suspicion seems well founded.

Ver. 332. *This whence, as some tell, all first rose, and where*
All shall at last return——] He particularly alludes to the theories of Anaximenes, and Anaximander. Respecting the former of whom see Note on Book I. v. 765. of this Poem. That the same idea was entertained by the latter we thus collect satisfactorily from Plutarch, Plac. Phil. i. 3. Ἀναξίμανδρος δὲ ὁ Μιλήσιος φησι, τῶν ὄντων τὴν ἀρχὴν εἶναι τὸ ἄπειρον· ἐκ γὰρ τούτου πάντα γίγνεσθαι, καὶ εἰς τοῦτο πάντα φθείρεσθαι. "Anaximander, the Milesian, teaches, that ether is the origin of all things: for, that by it all things are begotten, and into it all things must return."

To the same effect, our poet himself:

All springs from heaven etherial, all that lives
The sire of all is Ether.

B. II. v. 1000.

Quur supra bellum Thebanum, et funera Troiæ,
Non alias aliei quoque res cecinere poëtæ?

Ver. 339. *Whence ere the* Theban *war, and fate of* Troy
Have earlier bards no earlier actions sung?] This argument against the eternity of the world, and an infinite series of successions in animal life, so strenuously contended for by Aristotle, is strictly logical and impressive. Macrobius has copied, and expanded it in his book on the Dream of Scipio, ii. 10. Quis non hinc existimet mundum quandoque cœpisse, nec longam retro hujus ætatem, &c. "Who can believe otherwise than that the world had a beginning, and that, too, not long anterior to the present age, since we have no Grecian narrative of any thing, not even of splendid actions, and events that occurred earlier than two thousand years ago? Nothing worthy of notice, indeed, is recorded in any volume prior to the reign of Ninus, who is, by some, supposed to have been the father of Semiramis. But if the world had existed from the beginning, or, in the language of the philosophers, even before the beginning, why, through an innumerable series of ages, was the present mode of life never once invented? Why no discovery of the use of letters, which alone eternizes the memory of things? and why are some nations, even at this day, scarcely initiated into the knowledge of a variety of useful facts? Even the Gauls knew nothing of the cultivation of vines and olives till after Rome had acquired the full vigour of her youth: and other people, even at this moment, are totally ignorant of the most common and beneficial inventions among ourselves: arguments that seem strongly to contradict the eternity of things, and compel us to believe, that the world itself had a definite origin, and that all we are acquainted with arose progressively afterwards."

But it seems, we know more of these antique records now than was known two thousand years ago: though not a single archive has been since detected, nor an additional datum of any kind fallen accidentally into our possession. The marquis de Boufflers has given it as his opinion, in a very elegant and spirited essay (Discours sur la Litterature) delivered in the Academy of Sciences and Belles Lettres at Berlin, August 9, 1798, that there have been arts and sciences invented, and splendid actions and heroic virtues exhibited, of which we have now no conception, in periods of time long anterior to the first records of existing history: and that even Homer and Pindar were preceded by writers who excelled them as much as these poets have surpassed their successors. This may be an ingenious conjecture, but the illustrious orator might as well have amused his audience with speculations concerning the inhabitants of the moon, the exploits of her heroes, and the talents of her bards and philosophers. In direct opposition to this exuberance of surmise, I have already observed, in Note on Book I. v. 517. that Mr. Bryant will not allow the existence even of the Trojan war itself, and certainly, therefore, not of the Theban, to which our poet also refers, and which, if it occurred at all, must have occurred at a period anterior still; contending, at least with respect to the Trojan war, that it has no foundation in real history, and that all the celebrated heroes engaged in it, the glorious battles that were fought, and the eloquent speeches that were uttered, are equally creatures of the imagination: phantasms that, on the first touch of the Ithurial spear of philosophic inquiry, vanish into emptiness, and "leave not a rack behind."

Before I close this Note, I cannot avoid noticing, that this passage of our poet furnishes us with a complete datum as to the earliest æra to which the long lost Epic Cycle of Greece could extend, independently of the mere traditionary fables recorded in it. This celebrated collection of all the erudition of antiquity, whether historic or mythologic, is well known to have been of very high antiquity, though we are now ignorant both of its author, and of the age in which it was written. It was, doubtless, however, in existence long after, as well as before the time of Lucretius; for we find it referred to by Horace, (De Arte Poet. v. 136.) and have great reason to suppose, that Statius drew from this metrical history the plan for his Thebaid. M. Heyne, indeed, Excurs. ad lib. ii.

Whence ere the Theban war, and fate of Troy
Have earlier bards no earlier actions sung?

Æneid. has, with great plausibility, conceived that almost all the Roman, as well as the Greek poets, were intimately acquainted with it, and that many of them hence derived the chief part of their materials. If, then, this Book, which contained all the archives of antiquity, and which was certainly known to Lucretius, had enumerated any event of considerable moment, and which was regarded as sober history by his contemporaries, prior to the Theban and the Trojan wars,—we certainly should not have found our poet making the inquiry:

Whence ere the Theban war, and fate of Troy
Have earlier bards no earlier actions sung?

And, in reality, the little which we do know of this work induces me to suppose, that the latter was the very extent of the date assigned to it, as to actual history, and that, in particularising these two events, our poet had his eye directed, at the moment, to this very collection. It is uncertain, indeed, whether Homer's name were enumerated among the Cyclic poets; Casaubon gives us great reason to suppose it was; yet Athenæus takes no notice of him, while he expressly mentions the name of Aretinus, who is conceived to have been contemporary with Homer, and who certainly wrote a poem upon the very subject selected by the latter, Ιλιου Περσις, "The Fall of Troy." Contemporary also with Aretinus was Lesches, who, according to Phanias, as cited by Clemens of Alexandria, contended for superiority of merit with the author of the Ιλιου Περσις, and bore away the prize. The poem of Lesches was entitled Ιλιας Μικρα, "The Little Iliad:" which Poem is falsely attributed to Homer himself by the Homeric biographer who signs himself Herodotus. This "Little Iliad" of Lesches comprized, unquestionably, a part of the Epic Cycle. There was also included in it, according to Athenæus, a Poem entitled, "The Thebaid," the author of which is now unknown, but whom Casaubon has confounded with Antimachus. (In Athen. p. 480.) And we have no fragment in any writer which intimates the existence of any other poem founded upon any prior historical fact. The Trojan and the Theban wars were, therefore, in all probability, the earliest events of history referred to in this book of ancient legends; and it is hence highly probable, that our poet had it in his immediate recollection when writing the passage before us. In effect, we have no fragment in any writer which intimates the existence of a poem of any kind founded upon historic facts antecedent to the existence of Troy and Thebes.

The author, or rather editor of the Epic Cycle, if posterior, as in all probability he was, to the age of Homer, was, at least, anterior to that of Sophocles; for Athenæus expressly informs us that the Greek tragedian drew the subject of several of his dramas from the Cyclic poets. Casaubon, but with little authority to support him, attributes a part of this collection to Onomacritus, who flourished during the age of the Pisistratidæ, of which family, the last was banished from Athens in the second year of the sixty-seventh Olympiad, being five hundred and ten years before the Christian æra. M. Heyne very reasonably conceives that the entire compilation was not the work of one editor alone, but of a variety; and that some later scholar arranged its different parts into one uniform work. Proclus, in his Christomachia, a book long lost to the world, gave a catalogue of the names and the countries of all the poets whose productions constituted the Epic Cycle. Photius has preserved a fragment of the Christomachia, but, unfortunately, it does not comprise this important table.

Much of the writings of the Hebrews is unquestionably lost. The Book of Job is, in all probability, the most ancient of any that has descended to us. Its author is uncertain, and it has hence been ascribed to various writers of various ages: to Job himself, to Elihu, to Moses, to Solomon, and to Esdras. The general style and phraseology stamp it, in my opinion, as the work of Moses; and it is unquestionable, that it was written before the exodus from Egypt, since it contains not the remotest al-

Quo tot facta virûm totiens cecidere; neque usquam,
Æternis famæ monimentis insita, florent?
Verum, ut opinor, habet novitatem summa recensque
Naturâ mundi est; neque pridem exordia cepit.
Quâ re etiam quædam nunc artes expoliuntur;
Nunc etiam augescunt: nunc addita navigiis sunt
Multa; modo organicei melicos peperere sonores:
Denique, Natura hæc Rerum, ratioque, reperta est
Nuper; et hanc, primus cum primis ipse repertus
Nunc ego sum, in patrias qui possim vortere voces.

Quod, si forte fuisse antehac eadem omnia credis,
Sed periisse hominum torrenti secla vapore,

---

lusion to that miraculous event. The date of this poem, therefore, we possess: its perfection intimates that it was preceded by others. Of the general science of the antediluvian world, we know little more than by rational conjecture; the race that could erect cities, and construct such a vessel as the ark, must have made great advances in the circle of the arts and sciences. They must have been excellent mechanics, and geometricians, must have been acquainted with the knowledge and use of metals, and other fossils, and well skilled in navigation. They were also agriculturists, and cultivators of the vine. To which various kinds of knowledge, Josephus adds, that they were acquainted with letters, and that Noah took with him, into the ark, a regular history of the antediluvian world, and of its progress in science. He attributes the invention of writing and engraving to Seth, who erected two pillars, and engraved on them his astronomic discoveries. Lib. i. 3.

Ver. 341. *Whence fell each chief unhonour'd? and his deeds*
Shut from the tablet of immortal fame?] We cannot, in this place, but be reminded of the following verses of Horace:

Vixere fortes ante Agamemnona
Multi: sed omnes illacrymabiles
Urgentur ignotique longâ
Nocte, carent quia vate sacro.
Od. iv. 9.

Ere Agamemnon many a brave man sprung:
Yet unbemoan'd they fell, and void of glory;
By night's oblivious shades o'erhung;
For bard divine ne'er told their story.

Ver. 343. ——*the world's vast scope exists*
New from its nature, and of recent birth.] I follow Mr. Wakefield, and all the most uncorrupted copies:

Whence fell each chief unhonour'd? and his deeds
Shut from the tablet of immortal fame?
But, or I err, the world's vast scope exists
New from its nature, and of recent birth:
For many a liberal art now first unfolds,
And much is still progressive; genius much,
E'en at this hour, to navigation adds;
Nor minstrels long have struck the dulcet lyre:
While the vast science of the Rise of Things
Throughout is novel; and, among the first,
I first am number'd who the lore devis'd,
And taught its dictates in our native tongue.
Yet should'st thou deem that all things erst ensu'd
As now, but that the race of men unknown,

——habet novitatem summa recensque
Naturâ mundi est; neque pridem exordia cepit.
Ver. 331.

In the common editions, we meet with the latter line thus:

Natura 'st mundi, neque pridem exordia cepit.

Ver. 350. ——*and, among the first,*
I first am number'd who the lore devis'd,] Marchetti takes an opportunity, in this place, with a most extraordinary kind of anachronism, of paying a compliment both to Gassendi and himself. Little, indeed, could Lucretius expect, at the time of writing this distich, that the names of a poet and a philosopher, who were not to be born till nearly two thousand years afterwards, would ever become ingrafted into its text even in the form of a translation:

Questa stessa cagione, e questa stessa
Natura delle cose, ancorchè molto
Sia, che gia fu trovata, omai del tutto
Quasi sepolta in sempiterno obblio
Pur di fresco è risorta, e vie più vaga,
E più bella, che mai, per le immortali
Opre del gran Gassendo, onore, e lume
Del bel paese, ove la Senna inonda.
Ed io pur or principalmente, io stesso
Fui trovato fra tanti, ed ebbe in sorte
D'esporla altrui nella materna lingua
Pria d' ogni altro Toscan, come dettolla
Per entro a' dotti suoi carmi robusti
Pria d'ogni altro Romano il gran Lucrezio.

E'en this fair system that the Nature opes
Of Things created, long ere now disclos'd,
But since long buried in oblivious night,
At length more chaste, more lovely, from its grave
Springs, by Gassendi call'd, whose name shall live
The boast for ever of the banks of Seine;
And I, I first of all the Tuscan race
Uprose t' unfold it in my native tongue,
As first Lucretius to the Roman state
Unlock'd its mystic truths in verse sublime.

Aut cecidisse urbeis magno vexamine mundi,
Aut ex imbribus adsiduis exisse rapaceis,
Per terras, amneis, ac oppida cooperuisse ;
Tanto quique magis, victus, fateare necesse est,
Exitium quoque terrarum, cœlique, futurum.
Nam, quom res tantis morbis tantisque periclis
Tentarentur, ibei si tristior incubuisset
Caussa, darent late cladem, magnasque ruinas.
Nec ratione aliâ mortales esse videmur
Inter nos, nisi quod morbis ægrescimus iidem,
Atque illei, quos a vitâ Natura removit.

Præterea, quæquomque manent æterna, necessum est,
Aut, quia sunt solido cum corpore, respuere ictus,
Nec penetrare pati sibi quidquam, quod queat artas
Dissociare intus parteis ; ut materiaï
Corpora sunt, quorum naturam obstendimus ante :
Aut ideo durare ætatem posse per omnem,
Plagarum quia sunt expertia sic ut inane est,
Quod manet intactum, neque ab ictu fungitur hilum :
Aut etiam, quia nulla loci sit copia circum,
Quo quasi res possint discedere, dissoluique ;
Sic ut summarum summa est æterna, neque extra
Qui locus est, quo dissiliat : neque corpora sint, quæ
Possint incidere, et validâ dissolvere plagâ.

With all their records, conflagrations dire
Swept from the world, or earthquakes deep engulph'd,
Or floods, rapacious from perpetual rains,
Drown'd, and their towns, and citadels dissolv'd:
Then flows it doubly thou must own, convinc'd,
That heaven and earth hereafter may decay.
For since such woes, such dangers can assail
Created things, when once the cause augments
Perdition boundless must perforce ensue.
Nor by aught else can we ourselves decide
Mortal, but that with maladies we droop
Like those whom Nature ceaseless calls from life.
What lives immortal, too, must so exist
Or from its own solidity, empower'd
Each blow to conquer, undivided still,
As primal atoms, long anterior sung;
Or since, like vacuum, of all friction void,
Free from all touch, by impulse unimpair'd;
Or from the want of circling space in which
The severing atoms may dissolve and fall:
Such want the boundless whole of nature proves,
And hence eternal; for no place beyond
Spreads where its seeds could waste; nor from without
Can foreign force e'er enter to destroy.

At neque, utei docui, solido cum corpore mundi
Natura est, quoniam admixtum est in rebus inane;
Nec tamen est ut inane; neque autem corpora desunt,
Ex infinito quæ possint forte coorta
Conruere hanc rerum violento turbine summam,
Aut aliam quam vis cladem inportare pericli:
Nec porro natura loci, spatiumque profundi,
Deficit, exspargi quo possint mœnia mundi;
Aut aliâ quâ vis possunt vi pulsa perire.
Haud igitur leti præclusa est janua cœlo,
Nec soli, terræque, neque altis æquoris undis;
Sed patet inmani, et vasto respectat, hiatu.
Quâ re etiam nativa necessum est confiteare
Hæc eadem: neque enim, mortali corpore quæ sunt,
Ex infinito jam tempore adhuc potuissent
Inmensi validas ævi contemnere vireis.
Denique, tanto opere inter se quom maxuma mundi
Pugnent membra, pio nequaquam concita bello;
Nonne vides aliquam longi certaminis ollis

Ver. 367. *What lives immortal, too, must so exist*] This verse, and the twenty succeeding, are brought forwards, with but little variation, from Book III. 820. They are there, with much logical acumen, applied to the Epicurean doctrine of the soul; and they are now employed to establish the mortality of the world at large.

Ver. 387. ——*precluded from the gates of death*] In the original thus:

——leti præclusa est janua—— Ver. 374.

It was a favorite image of our poet, as I have already observed, in the Note on Book I. 1170. where I have instanced an imitation by Virgil, as well as a parallel figure in the Book of Job. Silius Italicus will furnish us with another:

——nullo nos invida tanto

But nor, as urg'd above, exists the world
All solid, since in all things void combines,
Nor yet all vacuum; nor, from the profound,
Are wanting powers adverse that, into act
Once rous'd tempestuous, may the world derange,
Or sever total; nor deficient space
Spread widely round, through which, in countless modes,
The frame mundane may crumble and dissolve;
Hence not precluded from the gates of death
Is heaven, or earth, or sun, or main immense,
Gates in full view, unfolded wide to each.

Hence too, since mortal, each alike exists
Of frame created; for no mortal make
Could, from eternal time, the rage have borne
Of countless ages urgent to devour.
And since, moreo'er, the world's vast members strive
In ruthless war, contending each with each,
See'st thou not clear some final shock must soon

Armavit natura bono, quam *janua mortis*
Quod *patet*, et vitâ non æquâ exire potestas.
Pun. xi. 187.

Of all the gifts by jealous Nature giv'n
This chiefly value, that the *gates of death*
Lie ope to all men;—from unequal life
The power t' escape.

In Dr. Young, who is seldom satisfied with a metaphor, as handed down to him, it occurs thus:

And soon as man, expert from time, has found
The key of life, it *opes the gates of death*.

Ver. 394. ——*the world's vast members strive*
In ruthless war, contending each with each,]
To the same effect, Milton:

For hot, cold, moist, and dry, four champions fierce,
Strive here for mast'ry; and to battle bring
Their embryon atoms.
Par. Lost, ii. 898.

Posse dari finem? vel, quom sol et vapor omnis,
Omnibus epotis humoribus, exsuperarint;
Quod facere intendunt, neque adhuc conata patrantur:
Tantum subpeditant amnes, ultroque minantur
Omnia diluviare ex alto gurgite ponti;
Nequidquam: quoniam, verrentes æquora, ventei
Deminuunt, radiisque retexens ætherius sol;
Et siccare prius confidunt omnia posse,
Quam liquor incepti possit contingere finem.
Tantum spirantes æquo certamine bellum,
Magnis de rebus inter se cernere certant;
Quom semel interea fuerit superantior ignis,
Et semel, ut fama est, humor regnarit in arvis.
Ignis enim superavit, et ambens multa perussit,
Avia quom Phaëthonta rapax vis solis equorum
Æthere raptavit toto, terrasque per omneis.
At pater omnipotens, irâ cum percitus acri,
Magnanimum Phaëthonta repenti fulminis ictu
Deturbavit equis in terram; solque, cadenti
Obvius, æternam subscepit lampada mundi:

Ver. 405. ——*the world*
With drought than deluge rather must expire:] An opinion equally coincident with the prophecies of holy writ, and the best ascertained geologic facts of the present day. See Note on Book II. 1173.

Ver. 407. *So strive they equal, so with powers alike*] To this phænomenon, says Lambinus, the contest of heat and moisture, we owe the following allegory in the Iliad:

Τοσσος αξα κτυπος ωρτο θεων εριδι ξυνιοντων·
Η τοι μεν γαρ εν αντα ποσειδαωνι ανακτι
Ἱσταθ' Απολλων Φοιβος. Υ. 67.

——such horrors rend
The world's vast concave when the gods contend;

Decide the contest? that the fiery sun
Perchance may conquer, and each flood drink up
Till nought survive; as oft dispos'd he seems;
Yet idly. For so vast the stores supplied
From springs perpetual, such the boundless main,
A daily deluge threats us; yet alike
Threats us in vain; for much the winnowing winds
Skim from the surface, and th' etherial sun
Such draughts exhales insatiate, that the world
With drought than deluge rather must expire:
So strive they equal, so with powers alike
Pant for the lists. And hence, as fame reports,
Flame triumph'd once, and once the boist'rous waves
Leap'd o'er their bound'ries, and the world engulph'd.
Flame triumph'd, and the total orb was fire
When the wild fury of the solar steeds
Whirl'd through the heav'ns, and o'er th' astounded earth
Ill-fated Phaëton, whom, deep-incens'd,
Almighty Jove hurl'd headlong from the skies,
While Phœbus caught th' eternal lamp, restrain'd

And silver-shafted Phœbus takes the plain
Against blue Neptune, monarch of the main.
Pope.

Ver. 414. *Ill-fated* Phaëton,——] The fable is known to every one: its particulars are related in Ovid, Metam. ii. Many of the philosophers have regarded it as an allegory. Thus Aristotle, De Mundo, bb. iv. While Plato in Timæo, interprets it as a symbol of the transmutation which is made in all material substances, by the application of intense heat.

Ver. 416. *While* Phœbus *caught th' eternal lamp,*—] Hence Virgil:

Postera Phœbeâ lustrabat lampade terras,
——Aurora—— Æn. vi. 6.

Disjectosque redegit equos, junxitque trementeis:
Inde suum per iter, recreavit cuncta, gubernans;
Scilicet, ut veteres Graiûm cecinere poëtæ:
Quod procul a verâ nimis est ratione repulsum.
Ignis enim superare potest, ubi materiaï
Ex infinito sunt corpora plura coorta:
Inde cadunt vires, aliquâ ratione revictæ;
Aut pereunt res, exustæ torrentibus auris.
Humor item quondam cœpit superare coortus,

Now with the *lamp of Phœbus* the new dawn
Lighted the world.

Ver. 417. ——*restrain'd*
Abrupt the trembling coursers, rein'd afresh,] In like manner Ovid, as Pius observes upon the passage before us:

Colligit, amentes, et adhuc terrore paventes
Phœbus equos.

Met. ii. 398.

The frantic coursers trembling yet with fear,
Phœbus restrains.

Ver. 424. *Or the red siroc burn the world to dust.*] Thus forcibly expressed in the original, ver. 411.

Aut pereunt res, exustæ torrentibus auris.

The siroc, or sirocco wind, by which I have ventured to interpret this passage, must be generally known by feeling or hearsay to most of my readers, as an intensely burning blast, periodically experienced in great part of Italy and the Levant, and blowing from the south-east over the fiery deserts of Syria, from which country, indeed, it derives its name—Sirocco for Syriacco. Milton expressly adverts to it in the following verses:

Forth rush the Levant and the potent winds
Eurus and Zephyr, with their lateral noise
Sirocchio and Libecchio.

There is a wind somewhat similar, though brisker in its action, and not quite so intolerable in its heat, that uniformly succeeds the wet season in Africa, and takes its direction from the north-east. It is known to most Europeans by the name of *harmattan:* and is accompanied by a thick smoky haze, through which the sun appears of a dull red colour. "This wind," says my friend Mr. Park (Travels in the Interior Districts of Africa) "in passing over the great desert of Sahara, acquires a very strong attraction for humidity, and parches up every thing opposed to its current. It is, however, reckoned very salutary, particularly to Europeans, who generally recover their health during its continuance. Indeed, the air, during the rainy season, is so loaded with moisture, that clothes, shoes, trunks, and every thing that is not close to the fire, become damp and mouldy; and the inhabitants may be said to live in a sort of vapour-bath. The ill effects of the harmattan are, that it produces chaps in the lips, and afflicts many of the natives with sore eyes."

Ver. 425. *Thus, too, th' insurgent waters once o'erpower'd,*] He obviously alludes to the fable of Deucalion and Pyrrha; and in both this, and the preceding of Phaëton, is thus followed by Manilius:

Et vomit oceanus pontum, sitiensque resorbet,
Nec sese ipse capit: sic quondam merserat urbes,

Abrupt the trembling coursers, rein'd afresh,
And into peace re-organiz'd the world.
So feign the bards of Greece, devoid alike
Of truth, and reason. Yet the power of fire
Doubtless might triumph, should the fiery seeds
Collect too largely from th' abyss of things:
When or some fiercer force their rage must quell,
Or the red siroc burn the world to dust.
Thus, too, th' insurgent waters once o'erpower'd,

Humani generis cum solus constitit hæres
Deucalion, scopuloque orbem possedit in uno.
Necnon, cum patrias Phaëthon tentavit habenas,
Arserunt gentes. iv. 828.

Vast mountains sink—and now his wide command
Neptune extends, and seas o'erspread the land,
Contemning shores. Thus were the towns o'erflow'd,
When, the sole heir of man, Deucalion stood
On steep Parnassus, to repair the stock,
The spacious world possessing in one rock.
And when bold Phaëton, with idle force
The chariot fill'd, and drove the flaming horse;
The earth took fire, heaven saw the stars recoil,
And frighted nature fear'd one common pile.
Creech.

According to the tradition of the Greeks, the world has therefore been twice menaced with universal ruin, once by fire, and once by water. This latter fable is obviously derived from the sacred narrative of Noah's flood; a fact, as I have several times had occasion to observe, corroborated by every geologic research of modern times. But the Hebrew scriptures make no mention of any equal catastrophe from the operation of fire; and it is difficult to trace the fable of the daring Phaëton to any known event in the annals of the world: at the same time it should be mentioned, that, upon a general mineralogical survey, there seems little reason to doubt that some such event has happened; although its history is no longer recorded in any existing archives. Such, indeed, are the proofs in every climate of igneous fusion and vitrification, that, as I have already remarked, Buffon, Dr. Hutton, Mr. Playfair, and various other geologists, attribute the origin of the world itself, or at least its present phænomena, to the operation of this individual principle. See Note on Book I. 693. The hypothesis of Buffon supposes the former, and asserts, not only that the earth, but that every other planet of the solar system, was originally a comet; and that these, by striking at different times against the external edge or limb of the solar sphere, carried off some portion of the sun's igneous mass, which, by uniting with the vapoury substance of the impinging comet, formed the chaotic basis of a future world. The hypothesis of Dr. Herschell, though built upon this of Buffon, is far more sublime and extensive in its range. It supposes the existence of an immense mass of opake, but igneous matter, seated in the centre of universal nature: that the sun, and every other star, were originally portions of this common substance; that it is volcanic in its structure, and subject to eruptions of inconceivable force and violence; that the sun, and every other luminary of a separate system, were thrown forth from it, at different times, by the operation of such projectile powers; and that these, possessing in a great degree, the qualities of the parent body,

Ut fama est, hominum multos quando obruit undis.
Inde, ubi vis, aliquâ ratione avorsa, recessit,
Ex infinito fuerat quæquomque coorta,
Constiterunt imbres, et flumina vim minuerunt.
Sed, quibus ille modis conjectus materiaï
Fundarit terram, et cœlum, pontique profunda;
Solis, lunaï, cursus; ex ordine ponam.
Nam certe neque consilio primordia rerum
Ordine se suo quæque sagaci mente locarunt;
Nec, quos quæque darent motus, pepigere profecto:
Sed, quia multa, modis multis, primordia rerum,
Ex infinito jam tempore percita plagis,

threw forth, at different times, from similar volcanos, portions of their own substance; which, by the common laws of projectiles, assumed an orbicular motion, and became the chaos of a rising world. See Notes on Book I. v. 1112. and Book II. v. 1173.

To admit either of these theories, however, is to suppose the existence of a larger portion of igneous power than is warranted by nature: the greater part of the mineralogic phænomena we meet with appealing rather to an universal aqueous solution, as their origin, than an universal igneous fusion. There are few stones that do not lose some part of their weight, and are altered either in their lustre, colour, hardness, or permeability to light, when heated. "Could this happen," inquires Mr. Kirwan, Geolog. Essays, p. 455. "if they owed their origin to heat?" Many silicious crystals not only lose their weight when exposed to a strong heat, but absolutely decrepitate. Zeolytes lose from 5 to 18 per cent.; turmaline, 15; and compound spar, as much as 45. Many crystals again, as those of quartz and calcareous spar, are occasionally found both with and without an intermediate prism, are terminated by a pointed pyramid at both ends. But it is impossible that such could be the result of previous fusion; for, in this case, they must necessarily have adhered, for their support, to some basis in contact with them while in fusion; a circumstance which must inevitably have altered their shape. Granularly foliated lime-stone, again, is often traced seated on argellite, and even intercepted between the laminæ of argellite: yet the argellite, although one of the most fusible of all stones, has not only discovered no marks of fusion, but even of having been heated.

As to the existence of an aqueous deluge, and that extending universally over the globe, long after the creation of vegetables and animals, the detection of shells on some of the highest mountains of Peru, upwards of 14,000 feet above the level of the sea; the bones of elephants and rhinoceri found in the lowest parts of Siberia; and shells known to belong to shores under climates very distant from each other, and yet mixt promiscuously together, are proofs of such a phænomenon, which all the labours of Buffon, Hutton, Baillie, and Playfair, can never invalidate or render questionable.

As fables tell, and delug'd many a state;
Till, in its turn, the congregated waves
By cause more potent conquer'd, heaven restrain'd
Its ceaseless torrents, and the floods decreas'd.
But from this boundless mass of matter first
How heaven, and earth, and ocean, sun, and moon,
Rose in nice order, now the muse shall tell.
For never, doubtless, from result of thought,
Or mutual compact, could primordial seeds
First harmonize, or move with powers precise.
But countless crowds in countless manners urg'd,
From time eternal, by intrinsic weight,

Ver. 433. *For never, doubtless, from result of thought,*] This, and several of the ensuing verses, are repeated with but little variation from Book I. 1080: to the Note on which passage I refer the reader for an explanation. That the doctrine here elucidated, was that of Epicurus, we have an additional authority in the following sentence, aptly cited by Lambinus, from Plutarch. De Placit. Philosoph. i. 4. Ὁ τοι νυν κοσμος συνιστη, περικεκλασμενῳ σχηματι εσχηματισμενος, τον τροπον τουτον· των ατομων σωματων, απροοντων και τυχαιαν εχοντων την κινησιν, συνεχως τε και ταχιστα κινουμενων εις το αυτο, πολλα σωματα συνηθροσθη, και δια τουτο ποικιλιαν εχοντα και σχηματων και μεγεθων.—

Ver. 436. *But countless crowds in countless manners urg'd,*] Every system of cosmology supposes the pre-existence of a chaos; but the derivation, as well as the nature of this chaos, has been differently accounted for. I have already stated the opinions of Buffon and Dr. Herschell, in Note on v. 425. of this Book. Epicurus, like our own ingenious countryman, supposed the existence of a vast mass of elementary matter in the centre of the universe: although, from the immensity of the universe itself, and its total want of bounds, he saw an evident impropriety in applying the term centre to any portion of space of which it consists. From this vast mass and fountain of matter, primitive or elementary atoms are perpetually flowing forth, and have been, according to the Epicurean system, from all eternity. They are all endowed with a creative or formative appetency, which very closely corresponds with the Newtonian principle of gravitation; and immediately with that lately advanced by professor Blumenbach, of a creative or formative power. (See Note on Book IV. 1264. vers. fin.) And when, after an infinite series of ages, and infinite variety of reciprocal impulsions and combinations, incalculable numbers of them at length meet in such a situation as to excite some kind of irregular cohesion, a chaos or nucleus of a future world is hereby engendered; and the homogenous substances of which it consists, at first separated at a great distance from each other, progressively approximating by a series of secretions and fermentations, the final result is the evolution of an harmonious whole, and the complete creation of a habitable world.

Ponderibusque suis consuerunt concita ferri,
Omnimodisque coire, atque omnia pertentare,
Quæquomque inter se possent congressa creare;
Propterea fit, utei, magnum volgata per ævom,
Omnigenos cœtus, et motus, experiundo,
Tandem conveniant ea, quæ, conventa, repente
Magnarum rerum fiunt exordia sæpe,
Terraï, maris, et cœli, generisque animantum.
Heic neque tum solis rota cerni, lumine largo,
Altivolans, poterat; nec magni sidera mundi,
Nec mare, nec cœlum, nec denique terra, nec aër,
Nec similis nostris rebus res ulla videri:
Sed nova tempestas quædam, molesque, coorta.
Diffugere inde loci partes cœpere, paresque
Cum paribus jungi res, et discludere mundum,

Ver. 446. ——*nor sun on fiery wheel was seen*] Probably derived from Ennius, of whom we have still the following fragment:

Inde patefecit radiis *rota* candida cœlum.

Whence the *bright wheel opes ether* with its beams.

Ver. 453. ——*and the rising world*
Gradual evolv'd:——] I have already given some account of the principal theories of cosmogony, advanced both by ancient and modern philosophers, in the Notes on Book I. from ver. 693. to ver. 900; and to these, without re-copying them, I beg leave to refer the reader. He will find that, however they differ in other respects, they all concur in the supposition of a primary chaos, a rude and heteroclite intermixture of the various bases of every future substance; as they do also in conceiving that the separation of such substances from each other was not performed instantaneously, but by a series of distinct evolutions and operations. The entire period of time thus consumed in finishing the great work of creation, has, in no instance, however, been attempted to be calculated. In the Mosaic narrative, it is limited to the revolution of *six* DAYS. Yet, as in the prophetic books we are compelled, in many cases, to give a considerable degree of latitude to the dates and pe-

And ceaseless repercussion, to combine
In all the possibilities of forms,
Of actions, and connexions, and exert
In every change some effort to create—
Rear'd the rude frame at length, abruptly rear'd,
Which, when once gender'd, must the basis prove
Of things sublime; and whence eventual rose
Heaven, earth, and ocean, and the tribes of sense.
Yet now nor sun on fiery wheel was seen
Riding sublime, nor stars adorn'd the pole,
Nor heaven, nor earth, nor air, nor ocean liv'd,
Nor aught of prospect mortal sight surveys;
But one vast chaos boist'rous, and confus'd.
Yet order hence began; the mingled mass
Unveil'd its various powers; congenial parts
Parts join'd congenial; and the rising world
Gradual evolv'd: its mighty members each

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riods we meet with,—to understand days by hours, and years or centuries by weeks,—there is no reason why we should not be allowed the same privilege in interpreting the books of poetry, whether lyric or historic, contained in the same volume. Moses, in perfect accordance with the best ancient and modern cosmologists, asserts the mundane system to have arisen from a rude and heterogeneous chaos, by a series of creative operations; each of which series he denominates *a day*. If this term be taken literally, the word of God is opposed by the work of God, the declaration of the sacred narrative by the most important facts and phænomena of nature. It cannot, therefore, have been intended, that it should have been thus understood; but that a similar key should be made use of here, which is universally applied to various parts of the books of prophecy; and the adoption of which reconciles at once the appearances of nature with the dictates of revelation—the history of Moses with the face of the earth itself. That the omnipotent Creator might have formed the world in a moment, if he had chosen it, can no more be doubted, than that he did not do so, even upon the most limited interpretation of Moses himself. And when, upon every history or hypothesis, whether sacred or prophane, we are compelled to acknowledge that various and distinct epochs

Membraque dividere, et magnas disponere parteis
Omnigenis e principiis; discordia, quorum
Intervalla, vias, connexus, pondera, plagas,
Concursus, motus, conturbât, prælia miscens,
Propter dissimileis formas, variasque figuras;
Quod non omnia sic poterant conjuncta manere,
Nec motus inter sese dare convenienteis.
Hocc' est a terris altum secernere cœlum,
Et seorsum mare utei secretom, humorque, pateret;
Seorsus item purei, secreteique, ætheris ignes.

Quippe et enim primum terraï corpora quæque,
Propterea quod erant gravia, et perplexa, coibant
In medio, atque imas capiebant omnia sedes:
Quæ, quanto magis inter se perplexa coibant,
Tam magis expressere ea, quæ mare, sidera, solem,
Lunamque, ecficerent; et magni mœnia mundi.

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were allotted to its progressive evolution, it can be no more derogatory to the omnipotence of the Deity to conceive that the aggregate period employed was six years or six centuries, than six days. See the prefixed Life of Lucretius, p. lxxx. as also Note on Book I. 693. and Book V. 425.

Ver. 463. *Thus air, secreted, rose o'er labouring earth;*] Hence Ovid, in his description of the same phænomena:

Nam cœlo terras, et terris abscidit undas;
Et liquidum spisso secrevit ab aëre cœlum.
Met. i. 22.

And earth from heaven he sever'd, main from earth,
And from the denser air secreted next
The liquid ether.

Ver. 466. *But first the seeds terrene, since pond'rous most,*] Milton, as he closely, yet sublimely copies the representation of Moses, does not essentially deviate in any respect from Lucretius, and a comparison between the Roman and the English bard will be neither unentertaining nor uninstructive. Thus, alluding to the chaotic ocean:

——darkness profound
Cover'd th' abyss; but on the watery calm

From each divided, and matur'd complete
From seeds appropriate; whose wild discord erst,
Rear'd by their strange diversities of form,
With ruthless war so broke their proper paths
Their motions, intervals, conjunctions, weights,
And repercussions, nought of genial act
Till now could follow, nor the seeds themselves,
E'en though conjoin'd, in mutual bond cohere.
Thus air, secreted, rose o'er labouring earth;
Secreted, ocean flow'd; and the pure fire,
Secreted too, tow'rds ether sprang sublime.
But first the seeds terrene, since pond'rous most,
And most perplext, in close embraces clung,
And tow'rds the centre conglobating sunk.
And, as the bond grew firmer, ampler forth
Press'd they the fluent essences that rear'd
Sun, moon, and stars, and main, and heaven's high walls.

His brooding wings the spirit of God outspread
And vital virtue infused, and vital warmth
Throughout the fluid mass; but downwards purg'd
The black, Tartarean, cold infernal dregs
Adverse to life; then founded, then conglob'd
Like things to like; the rest to several place
Disparted, and between spun out the air,
And earth, self-balanc'd, on her centre hung.
PAR. LOST, vii. 233.

Ver. 471. ——*heaven's high walls.*] See Note on Book I. 1112. Hence, Manilius:

——qui primus *mœnia mundi*
Seminibus struxit minimis. i. 486.
—who first the world's wide walls
Rear'd from minutest seeds.

And again:

Ignis in ætherias volucer se sustulit oras;
Summaque complexus stellantis culmina mundi,
Flammarum vallo naturæ mœnia fecit. i. 149.
Towards ether's realms the fluent fire uprose,
And folding firm the starry world's extreme,
Built Nature's walls with mounds of lambent flame.

Omnia enim magis hæc e lævibus atque rotundis
Seminibus, multoque minoribus sunt elementis,
Quam tellus: ideo per rara foramina terræ,
Partubus erumpens, primus se substulit æther
Ignifer, et multos secum levis abstulit igneis:
Non aliâ longe ratione, ac sæpe videmus,
Aurea quom primum, gemmanteis rore, per herbas
Matutina rubent radiati lumina solis;
Exhalantque lacus nebulam, fluvieique perennes:
Ipsaque et interdum tellus fumare videtur:

Ver. 474. ——*with foremost haste*
Rush'd the bright ether, tow'ring high,——] Thus Ovid, in verses truly elegant:

Ignea convexi vis, et sine pondere, cœli
Emicuit, summâque locum sibi legit in arce.
Met. i. 26.

In fiery pride forth shone the convex heavens,
Weightless, and claim'd the sphere's sublimest bounds.

Ver. 480. *And from the mountains, lakes, and teeming glebes,*
Draws many a vapour;——] Nothing can be a more just, or a more exquisitely beautiful picture of the formation of the atmosphere, unless, indeed, it be the boldly figurative and concise description of Moses: "and the spirit of God moved upon the face of the waters." In which passage, observes Mr. Kirwan, the word *breath* or *spirit* denotes an invisible elastic fluid, to wit, the great evaporation that took place as soon as the solids began to crystallize. "*Of God,*" is a well-known Hebrew idiom denoting *great;* and the term "*moved,*" obviously means "*hovered.*"

I have given this passage an interpretation, in some degree, different, and considerably more literal, in my Memoirs of Dr. Geddes's Life and Writings, p. 337: but it is a difference which will introduce no variation into the general history of this great event. I have there observed, that the Hebrew term, מרחפת, in our common versions, rendered *moved*, occurs but three times in the whole course of the Bible; and, in every instance, implies *internal agitation*, rather than simply *moving*, or *hovering over:* and that the phrase, *Spirit of God*, (רוח אלהים) rather refers, definitively, to the time, and cause, and mode, in which, and by which the first process in the order of creation occurred, than generally and indefinitely to a *vast* or *mighty wind* of any kind. In consequence of which, with a slight change in the common punctuation, I would read the first two verses of the Book of Genesis as follows: "In the beginning, God created the heavens and the earth. The earth was yet a desolate waste, with darkness upon the face of the deep. And the Spirit of God agitated the waters to their surface."

It was from this ferment or agitation that the heat and evaporation, in all probability, proceeded, noticed by our poet in the verses before us, and still more largely by Mr. Kirwan himself, in the following passage of his very excellent Essays:

"From the existence of the chaotic mass, in a

For these of atoms lighter far consist,
Subtler, and more rotund than those of earth.
Whence, from the pores terrene, with foremost haste
Rush'd the bright ether, tow'ring high, and swift
Streams of pure fire attracting as it flow'd.
Not differing wide from what full oft we view
When, at the dawn, the golden-tressed sun
Flames o'er the meadows rich with rory gems,
And from the mountains, lakes, and teeming glebes,
Draws many a vapour; which, when once aloft

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liquid state, we well know, that it must have been at least heated to thirty-three degrees of Fahrenheit's thermometer, and possibly much higher: it contained all the different genuine earths, all the metallic and semi-metallic substances now known, the various simple saline substances, and the whole tribe of inflammables, solid and liquid, which are of a simple nature, variously distributed, and probably in a proportion nearly the same as that they at present bear to each other; forming, upon the whole, a more complex menstruum than any that has since existed; and, consequently, endued with properties very different from any with which we have been since acquainted.

It is a fact, at present well established, that in the act of crystallization, a very considerable degree of heat is generated: the heat produced, therefore, by the crystallization of such immense quantities of stony masses as necessarily took place at this time, and under these circumstances, must have been prodigious; and its immediate consequence must have been the ascent of the etherial atmosphere thus elegantly described by Lucretius: the ascent, in effect, of an enormous and universal evaporation sweeping over the surface of the heated fluid according to the inequality of its diffusion, and the different causes that produced it.

Our geological bard, however, not only represents to us the ascent of this unbounded vapour, but adds that it was accompanied, "as it flowed, with streams of pure fire." And now let us, for one moment, examine how far such additional assertion agrees with the modern theory of Mr. Whitehurst, as improved and corrected by Mr. Kirwan. "In consequence of the heat and evaporation, as instanced above, the quantity of the chaotic fluid," observes this latter cosmologist, (Geological Essays, p. 18.) "as also its specific gravity, was diminished, and thus the substances contained in it were still more disposed to precipitation: the ferruginous particles were rapidly and copiously precipitated, and the aqueous particles intercepted between them, being hereby decomposed, an immense quantity of inflammable air was let loose; and the heat thus produced, increasing with the masses operated upon, must have arisen, at last, to incandescence." Hence again the oxygen absorbed must have been, in great measure, expelled; and, in its nascent state, meeting and uniting with the inflammable air, must have burst into flame. The progress of such high degrees of heat must have disengaged all the oxygen contained in the contiguous chaotic fluid, which uniting partly with more metallic iron, partly with the sulphurated, and partly with the carbonic and bituminous substances, must

Omnia quæ, sursum quom conciliantur in alto,
Corpore concreto, subtexunt nubila cœlum:
Sic igitur tum se levis ac diffusilis æther,
Corpore concreto circumdatus undique, sæpsit;
Et, late diffusus in omneis undique parteis,
Omnia sic avido conplexu cætera sæpsit.
Hunc exordia sunt solis, lunæque, sequuta; et
Inter utrasque globei quorum vortuntur in auris;
Quæ neque terra sibi adscivit, nec maxumus æther;

have occasioned a stupendous conflagration, the effects of which may be well supposed to have extended even to the solid basis on which the chaotic fluid reposed, and to have rent and split it to an unknown extent.

According to the theory of Lucretius, and indeed the history of Moses himself, this stream of extricated fire was concentrated, as it arose, into the different and previously extricated orbs of the sun, moon, and stars, which, like so many lenses, compelled it to converge into distinct foci, whence they became themselves fiery and luminous bodies. But the farther consideration of the phænomena of the heavens, and the different theories which have been advanced upon this subject, I defer for the present, as our immediate concern is with the earth alone.

The system of Mr. Kirwan does not admit that the whole body of the earth, to its inmost centre, was in a state of liquefaction at the time when the phænomena, which we at present witness, took place towards its surface. He conceives, with Boscovich and La Metherie, that the central parts of the earth, both at this time, and till many centuries afterwards, contained immense caverns, and consisted of materials sufficiently solid to resist the pressure of the enormous mass of liquid substance placed over them. But even these very caverns imply the existence of some equal violence at the centre of the earth, during some period or other; for they could not have been produced without some very powerful, and, probably, volcanic disruptions. The immense masses concreted, however, and deposited on this interior nucleus of the earth, constitute, upon the system of Mr. Kirwan, the *primitive mountains;* the *plains* being supposed to have been formed in the intervening space of distant acclivities, from the gradual and regular subsidence of the solid particles which were still contained in the chaotic fluid, after the first crystallized masses had been deposited, but which were now too remote from each other's sphere of attraction to concrete into crystals; while the greater part of them, moreover, as the argillaceous particles, were of a species least disposed to crystallize, as possessing least affinity to the common solvent of water. Hence the deposit of these must have been level, or without any great deviation from an horizontal line. The creation of the sea, or rather the retreat of the now unembarrassed chaotic fluid into distinct beds and channels of lower elevation, whereby the dry land was disclosed, and rendered habitable, was produced by vast and numerous fractures, extending in different directions, through the hollow nucleus of the globe, during the violent conflagrations and volcanos I have just noticed, by which this chaotic fluid was received into the immense and empty caverns existing towards its centre. This retreat of the chaotic ocean through the fissures of the central nucleus, Mr. Kirwan apprehends to have been very gradual, and to

By the chill air condens'd, to clouds concretes,
And with its filmy drap'ry veils the heavens.
So the light ether, as from every point
Fluent it rose, concreted, and a bound
Gradual assum'd, and, thus assuming, grasp'd
In its vast compass all th' evolving world.
Then mounted, next, the base of sun, and moon,
'Twixt earth and ether, in the midway air,
Rolling their orbs; for into neither these

have continued long after the creation of animals and vegetables, and not indeed to have ceased altogether, till within a few centuries before the deluge. And he grounds this opinion upon the existence of mountains hence termed secondary, which contain marine shells, or other remains of animal or vegetable substances between their strata, or incorporated in the rocks of which they consist, and which must have been formed before the sea had retreated far from such elevations. He is also farther confirmed in this belief from the discovery of trees of different kinds, as well as of various other vegetables in great depths within the range of our modern continents, and even under lofty mountains; as well as on the summits of mountains at heights where, from the degree of cold which at present prevails over them, they could not grow. To these, he adds the existence of stratified mountains, between whose strata various substances of marine and some terrestrial vegetables repose, either in their natural state, or petrified: the regularity and uniformity of which deposit could have been effected by no other power, that we are acquainted with, but successive and uniform tides.

Ver. 486. ——*grasp'd*
In its vast compass all th' evolving world.] An idea nearly similar occurs in ver. 331. of the present Book: and thus Manilius, with elegant imitation:

Ipsa natat tellus, pelagi lustrata coronâ
Cingentis medium liquidis amplexibus orbem.
iv. 593.

Earth swims herself, enfolded by the main,
That clasps her bosom in his liquid arms.

Ver. 489. *'Twixt earth and ether, in the midway air,*
Rolling their orbs;——] Of the Ptolemaic system of astronomy here adverted to, the reader will find some account in an ensuing Note of the Book before us. I have already observed, that the universal flame which necessarily ascended with the earliest exhalation from the surface of the chaotic fluid, and which, indeed, formed a part of the atmosphere itself, upon the theory of the present poem was attracted by the sun, moon, and stars, and particularly by the first, and compelled to converge and become concentrated as in the foci of so many different lenses. But we here find the substance of these luminaries represented as a distinct body from the empyreal ether, which is supposed to be as much lighter than these, as these are than the earth, and of course which ascended as far above them as the earth sunk below. Milton only differs from this description, in asserting that these luminous bodies were created from the ether itself:

Quod neque tam fuerint gravia, ut depressa sederent,
Nec levia, ut possent per summas labier oras;
Et tamen inter utrasque ita sunt, ut corpora viva
Vorsent, et partes ut mundi totius exstent:
Quod genus, in nobis quædam licet in statione
Membra manere, tamen quom sint ea, quæ moveantur.

Hiis igitur rebus retractis, terra repente,
Maxuma quâ nunc se ponti plaga cærula tendit,
Subcidit, et salso subfodit gurgite fossas:
Inque dies quanto circum magis ætheris æstus,
Et radiei solis cogebant undique terram
Verberibus crebris, extrema ad lumina apertam,
In medio ut, propulsa, suo condensa coiret;
Tam magis expressus salsus de corpore sudor
Augebat mare manando, camposque natanteis:
Et tanto magis illa, foras elabsa, volabant
Corpora multa vaporis, et aëris; altaque cœli
Densabant procul a terris fulgentia templa:

And this etherial quintessence of heaven
Flew upward, spirited with various forms
That rolled orbicular, and turned to stars.

Par. Lost, iii. 716.

Ver. 494. ——*vital there*
Moving for ever, parts of the vast whole ;] So Camoens, in the following description:

Qual a materia seja nam se enxerga,
Mas enxergase bem que està composto
De varios orbes que a divina verga
Compos, e hum centro a todos sò tem posto:
Volvendo, hora se abaxe, agora se erga,
Nunca se ergue, ou se abaxa, e hum mesmo rosto,
Por toda a parte tem, ed em toda a parte
Começa, ed acaba, em fim por divina arte.

Lus. Cant. x. 78.

Could blend harmonious, since too light with earth
To sink deprest, while yet too pond'rous far
To fly with ether towards the realms extreme:
So 'twixt the two they hover'd; vital there
Moving for ever, parts of the vast whole;
As move for ever in the frame of man
Some active organs, while some oft repose.
These from the mass discharg'd, much next of earth
Subsided sudden, and the gulph disclos'd
Where ocean rolls his blue and briny tide.
And as th' etherial gass, and solar blaze
Flow'd more profuse, and lash'd, with ceaseless rage,
The porous surface, firmer thus condens'd
Towards its own centre, the corrosive lymph
Ampler transuded; and with livelier streams
Fill'd the wide hollow of the liquid plains:
And ampler, too, th' attenuate textures rush'd
Of air, and fire, and, borne on swifter wing,
High rear'd the radiant temples of the sky.

Through every part the light transparent flow'd,
And in the centre, as the surface, glow'd.
The frame etherial various orbs compose;
In whirling circles now they fell, now rose;
Yet never rose nor fell, for still the same
Was every movement of the wondrous frame.
MICKLE.

Ver. 499. ——*and the gulph disclos'd*
Where ocean rolls——] For the doctrine of the Moderns concerning the formation of the ocean, see Note on ver. 480. of the Book before us, and on ver. 770. of Book 1.

Ver. 506. ——*liquid plains*:] Thus Virgil, as also in many other places:

——cœlum, ac terras, camposque liquentes.
ÆN. vi. 724.

——earth, ether, and the *liquid fields*.

Sidebant campei, crescebant montibus altis
Adscensus; neque enim poterant subsidere saxa,
Nec pariter tantumdem omnes subcumbere partes.
Sic igitur terræ, concreto corpore, pondus
Constitit; atque omnis mundi quasi limus in imum
Confluxit gravis, et subsedit funditus, ut fæx.
Inde mare, inde aër, inde æther ignifer ipse,
Corporibus liquidis, sunt omnia pura relicta;
Et leviora aliis alia; et liquidissimus æther,
Atque levissimus, aërias super influit auras;
Nec liquidum corpus turbantibus aëris auras
Commisci: sinit hæc violentis omnia vorti
Turbinibus, sinit incertis turbare procellis;
Ipse suos igneis certo fert inpete labens;
(Nam modice fluere atque uno posse æthera nixu
Significat Ponto mare, certo quod fluit æstu)

Ver. 513. *So all was form'd:*——] Virgil, who, at the time he composed his immortal Æneid, was attached to the doctrines of Plato, is justly suspected, in an earlier period of life, to have been a follower of Epicurus. His sixth eclogue, in which he delineates the origin of the world in the person of Silenus, bears every mark of attachment to the Epicurean theory, and is in reality founded upon it. The resemblance is hence striking between the description contained in this eclogue, and that in the passage before us. The following lines are sufficient to afford the reader an opportunity of deciding upon the comparative merits of the two poets:

Namque canebat uti magnum per inane coacta
Semina, terrarumque animæque, marisque fuissent,
Et liquidi simul ignis: ut his exordia primis
Omnia, et ipse tener mundi concreverit orbis.
Tum durare solum, et discludere Nerea ponto
Cœperit, et rerum paulatim sumere formas.
Jamque novum ut terræ stupeant lucescere solem,
Altius atque cadant submotis nubibus imbres:
Incipiant sylvæ cum primum surgere, cumque
Rara per ignotos errent animalia montes.

Ver. 31.

He sung the secret seeds of nature's frame;
How seas, and earth, and air, and active flame

Low sunk the vales, the mountains still sublime
Stood, for no power their rocky base could shake,
Nor equal settled e'en the softer soils.
So all was form'd: the pond'rous bulk of earth
Concenter'd close, and to the lowliest base
Fell, the foul fæces of th' unfolding world:
While ocean, air, and ether fill'd with fire,
Sprang from the remnant atoms more refin'd.
Yet these, too, differ'd; for, though liquid all,
And light, yet ether far the rest surpass'd,
Most light, most liquid, and in heaven sublime
Hence loftiest tower'd it, never mingling once
With the rude tumults of the lowlier air:
For whirlwinds this, and wayward tempests, oft,
Shatter abrupt, while ether glides through time
In one smooth course, and bears its fires along;
As flows th' undevious Euxine, and preserves

Fell through the mighty void, and in their fall
Were blindly gather'd in this goodly ball.
The tender soil then, stiff'ning by degrees,
Shut from the bounded earth the bounding seas.
Then earth and ocean various forms disclose;
And a new sun to the new world arose.
And mists, condens'd to clouds, obscure the sky;
And clouds dissolv'd, the thirsty ground supply.
The rising trees the lofty mountains grace;
The lofty mountains feed the savage race,
Yet few are strangers in th' unpeopled place.
Dryden.

Ver. 514. *Concenter'd close, and to the lowliest base Fell, the foul fæces of th' unfolding world:*] Thus Milton, obviously imitating our poet:

——but downwards purg'd
The black, Tartareous, cold, infernal dregs
Adverse to life; then founded, then conglob'd, &c.
Par. Lost, vii. 237.

So Ovid, affording an equal proof of copy:

Hæc super imposuit liquidum, et gravitate carentem
Æthera, nec quicquam *terrenæ fæcis* habentem.
Met. i. 68.

O'er these the liquid ether he display'd
From earth's foul fæces strain'd, and void of weight.

Unum labundi conservans usque tenorem.
Motibus astrorum nunc quæ sit caussa, canamus. 510

Ver. 526. *At flows th' undevious* Euxine,—] It is well known, that the Euxine, the Mediterranean, and many other seas flow perpetually in one uniform current, and exhibit no excess or deficiency from a flux or reflux of tide: of the two here enumerated, the direction of their currents is diametrically opposite: for while the Mediterranean is for ever receiving an increase of waters, and flowing towards the interior; the Euxine is perpetually parting with its waters, and flowing externally into the Mediterranean. Yet each preserves its balance; the Euxine is never exhausted, nor the Mediterranean ever exundates. Different causes have been advanced in order to account for these extraordinary phænomena. With respect to the former, it has been generally supposed, that its supply is obtained from the Danube, the Don, the Nieper, and other considerable rivers, that empty themselves into its bason; while the excess and superfluity of the latter is conceived to be carried off by evaporation from its surface. Neither of these explanations, however, are altogether adequate or satisfactory: it is more probable that the one is fed by springs, and the other emptied by fissures, which lie too low for the penetration of man, and form a communication with the Red Sea, whose current, contrariwise to that of the Mediterranean, is perpetually flowing out. Or, perhaps, the accumulation of water in the Mediterranean is carried off by an inferior and opposite current; for that such antagonist currents do occasionally, and probably at all times, exist in the ocean itself, there can be no doubt. Some very ingenious experiments of count Rumford seem, indeed, to demonstrate that fluids of all kinds, when heated to different temperatures in different parts of their volume, must necessarily have such an opposition of currents; the warmer, from its rarefaction and specific levity, occupying the superior part, and the colder the part below; a fact from which we may explain, to illustrate the remark by a common incident, the greater frigidity of the bottom of a boiling tea kettle, though immediately in contact with the fire, when measured with the heat of its sides and summit. In like manner in the ocean, the philanthropic writer, to whom I have just referred, suspects there is an under current of cold water flowing perpetually from the poles towards the equator, even where the superior waters flow obviously from the equator towards the poles: nor is it possible, as he thinks, to account for the difference of temperature which exists at different depths of the sea upon any other principle. On the 31st of August, in the latitude of 69, when the temperature of the atmosphere, and probably of the surface of the sea, was 59½ of Fahrenheit's thermometer, lord Mulgrave found that the water at the depth of 4038 feet, sunk the thermometer to 32. And at the tropic, where the difference of seasons never produces a difference in the temperature of the atmosphere of more than five or six degrees, the variation between the heat of the water at the surface of the sea, and that at the depth of 3600 feet, has been found to amount to no less than 31 degrees: the superior temperature measuring 84, and that below not more than 43. Essays Political, &c. Vol. II. Be the real cause of these phænomena, however, what it may, Lucretius has selected a most beautiful and apposite simile, by which, to illustrate the undeviating and eternal course of the fluid ether which he places in the superior regions of the atmosphere. The translators have all, nevertheless, most unaccountably mistaken his meaning; and have interpreted the expression *Ponti*, or *Ponto mare*, for it occurs differently in different editions, as generally referring to the sea at large, and not individually to the Euxine, which it literally and peculiarly expresses. In consequence of which, the appropriate beauty of the simile is totally destroyed: for, whatever may be the uniform regularity of the tides of the sea, the object of the poet is to convince us, that the ethereal emanation has no tides whatever. Even Marchetti himself has fallen into this mistake:

Egli però con certo
Impeto i fochi suoi move scorrendo:
Che volgersi con ordine, ed avere
L'Etere una sol forza, aperto il mostra

One ceaseless tenour, limpid and serene.
How move the stars, now next the muse shall sing.

Un si vast' oceam, che parte, e torna
Certo nel moto, e un sol tenor conserva.

Ver. 528. *How move the stars, now next the muse shall sing.*] The cosmogony of Epicurus, as we have already seen, embraces the whole of the visible heavens; the earth and all the celestial bodies being supposed to have originated from the same chaos at the same period of time; the cosmogony of Moses is equally universal, and he is, in this respect, closely followed by Des Cartes. The theory of Mr. Whitehurst, however, confines itself to the solar system alone; while those of Burnet, Whiston, Buffon, La Metherie, Baillie, and Kirwan, do not extend beyond the earth and its appropriate atmosphere; referring the sun and the other planets to a different origin. Des Cartes, like Epicurus, supposes, as I have already observed, that the power of motion was communicated to matter for the grand purpose of creation; and that the chaotic mass, after it was thus endowed, was left to the operation of this mechanical power alone; which, in process of time, and after the lapse of many ages, and the exhibition of an infinite variety of junctions and disjunctions, decompositions and recombinations, produced and completed the system of the world, as we behold it at present. The elementary particles of matter, upon the system of Epicurus, are not infinitely divisible, nor exactly of the same figure: they are solid, compact bodies, like the elementary particles of Sir Isaac Newton; their figures can never be changed, and from this variation of their figures is produced the variation in the texture of compound bodies. This subject is fully discussed in the first and second Books of the poem before us. The elementary matter of Des Cartes, however, is infinitely divisible; and its original particles, which, on the first endowment of motion, were not perfectly globular, have all been long since abraded of their angles by reciprocal occursion, by which means the greater part have been rendered completely globular. The fragments, thus abraded from the angles of the spherical particles, must, from their very shape, be frequently intertangled, and hereby be rendered far less fit for motion than the particles perfectly spherical. But in the mutual brunt and concussion which must frequently be taking place between these angular particles, they themselves must frequently also be rendered globose, or have little globose particles frittered away from them in the combat: both which kinds of globular atoms must be inconceivably smaller than those at first produced from the primal or elementary particles of chaotic matter. Des Cartes hence supposes the existence of three different species of material atoms, globular of a larger size, globular of a smaller, and jagged or angular. From the smaller globules, and which, in consequence of their being smaller, are more voluble and active, he conceives the sun and the fixt stars to have been created; from the larger and less active, the etherial heavens; and from those of an angular or jagged shape, the earth, planets, comets, and other meteoric bodies.—He conceives, that in the creation of the universe from one common chaos, a variety of immense masses of matter, from the principle of motion with which they were endowed, commenced a variety of distinct and perpetual gyres or vortices, extending through the entire substance of which each mass consisted: that each of these masses thus commencing a separate whirl, laid the foundation for a distinct planetary system: that every such mass was compounded of the three orders of elementary particles just enumerated; and that in consequence of such perpetuity of motion, every classification of orbs, within the range of the visible heavens, was gradually explicated and arranged; the finest globules, as I have just observed, constituting, by their junction, stars, or other suns for other systems than our own; and the larger creating, the *materia subtilis*, or universal ether, by which every system is surrounded; while from the angular particles were produced the different planets of every stellar vortex.

I have dwelt the longer upon this ingenious theory of Des Cartes, because, notwithstanding the occasional variations which appear in it from the

Principio, magnus cœli si vortitur orbis,
Ex utrâque polum parte premere aëra, nobis
Dicundum est; extraque tenere, et cludere utrimque:
Inde alium supra fluere, atque intendere eodem,

theory of Epicurus, there are still so many points of resemblance as to indicate its origin. In either system, the elementary particles are possessed of different shapes and powers of mobility. Under Epicurus, those of the lightest globular form were selected as the basis of the etherial atmosphere, and those of a similar form, but of larger dimensions, for the creation of the sun and the stars; under Des Cartes, the same economy prevails, but conversely; while each supposes the earth itself to result from an agglomeration of the more jagged and angular, and consequently the less volatile particles. The principal difference consists in the number of vortices introduced into the entire system: Epicurus allowing but one, which envelopes the whole of the visible heavens, and embraces the stars as well as the sun; and Des Cartes contending for a diversity; transferring the stars beyond the vortex of the solar system, and bestowing on each star a distinct vortex, as well as distinct planets of its own.

Ver. 529. —*if heaven's vast orb we deem revolve Round the fixt earth,*——] Among the Greek philosophers there were two grand hypotheses, by which it was conceived, that the various phænomena of the mundane sphere might be resolved: the one, introduced first of all by Pythagoras, that the sun constitutes the centre of a distinct system, and is an immoveable body, around which the earth and planets revolve in different periods of time, while the stars lie beyond its boundary; and the other of Egyptian, or, more probably, Hindu origin, that the earth itself forms the centre of the whole visible sphere, and is as immoveable as the sun upon the theory of Pythagoras; the heavens revolving round it in a perpetual vortex or gyre, from east to west, and carrying with them the sun, planets, and stars, once in every twenty-four hours. The Pythagorean hypothesis was embraced by Socrates and Plato: but from its total incongruity with the apparent facts of nature, and the imperfection of the hypothesis itself, as at first advanced, it received but little encouragement, in any period, from the philosophers of Greece or Rome, and was absolutely suppressed by ecclesiastical authority in the earlier and middle ages of the Christian æra; and continued to be so suppressed till about two centuries ago. It was, however, occasionally revived, even from its earliest institution, by philosophers of distant dates from each other, and by some of them considerably improved and illustrated. Of these, the principal are Nicetus of Syracuse, who contended for the diurnal motion of the earth round its own axis; Philolaüs, who discovered its annual path through the ecliptic; Archimedes, who concentrated and exemplified the general principles of this theory in his book De Granorum Arenæ Numero; and Aristarchus of Samos, who elucidated still more fully the important discovery of Philolaüs. But the triumph of the Egyptian hypothesis over the Pythagorean, was principally owing to the concurrent support it derived from Aristotle and Epicurus, who embraced it in all its bearings, and often plausibly applied it to the solution of the phases of the heavens. In its progress, it was still farther improved by Eudoxus, Calippus, and Apollonius, till its utmost finish was at length added to it by Ptolemy, in the second century of the Christian æra, from whom it derived the appellation of the Ptolemaic system. To the principles both of this system and the Pythagorean, together with the eventual triumph of the latter over the former by the industry and laborious research of Copernicus in the sixteenth century, I have already adverted in the Note on Book II. v. 1065; and to the account there given I refer the reader for additional information.

Upon the revival of the Pythagorean system by

And first, if heaven's vast orb we deem revolve
Round the fixt earth, some subtle gass, perchance,
Bounds it on all sides, and with two-fold stream,
Whirls round its poles; the current urg'd above

Copernicus, the contest between the adherents to this, and the system of Ptolemy, was conducted with the utmost degree of warmth and acrimony. The schoolmen who uniformly professed the latter, stimulated the church into a common cause with themselves; and as they were not able to silence their adversaries by fair argument, endeavoured to do so by the more forcible means of imprisonment and exile. The Scriptures, it was said, had inculcated their own hypothesis; and to maintain that the sun rested, and the earth moved, was actual blasphemy. It was denied, however, that the Scriptures had inculcated any thing of the kind, or that they were designed to instruct us in philosophy of any description: the system of Ptolemy, it was superadded, was erroneous in its first principles, and with all the alterations it had sustained, and the complex machinery with which it had been encumbered, was still incompetent to account for a variety of the most common phænomena; while that of Copernicus, on the contrary, was simple in its structure, satisfactory in its solution, and infinitely more sublime and comprehensive in its compass.

To adjust this dispute, Tycho Brahe, about half a century afterwards, introduced a third system borrowed from both the former. He retained the earth in the centre of the starry firmament, and supposed it to be permanently fixed in its station; while, as on the Ptolemaic system, the heavens revolved around it in the space of twenty-four hours: but, like Copernicus, he conceived the sun to be the centre of the orbits of Mercury, Venus, Mars, Jupiter, and Saturn; and that the moon had a distinct and monthly motion round the earth, as had also the different satellites of Jupiter and Saturn periodic motions round their respective planets.—This theory, however, instead of adjusting the supposed difficulties or incongruities of the two former, is far more embarrassed than either of them: and although attempted to be improved upon by Longomontanus, and several other astronomers, has never acquired any considerable degree of reputation. The Copernican system has been progressively advancing over every rival theory from the first moment of its publication, and the labours of Gallileo, Kepler, Des Cartes, Newton, Clairaut, Euler, and D'Alembert, have completed its triumph. There was lately, however, exhibited in Leicester Fields, a very elegant orrery constructed upon the Ptolemaic hypothesis, and which, upon mechanical principles exhibited all the more common phænomena of the celestial sphere, with the utmost degree of punctuality. Its inventor was a low mechanic of the name of Martin; a man of ingenuity, but totally ignorant of mathematical science; and possessing a measure of vanity and conceit in exact proportion to his want of education. He believed himself peculiarly commissioned by heaven to overthrow the system of Copernicus, and refute the principles of Newton; but from want of patronage, to which it must be confessed that his arrogance but little entitled him, instead of overthrowing the one, and refuting the other, he soon found himself compelled to dispose of his orrery at a fourth part of its value, for the subsistence of himself, and a family of children.

Ver. 531. *Bounds it on all sides, and with two-fold stream,*] The poet has long before told us, that the mundane sphere is perpetually receiving an accession of fresh elementary atoms, and is as perpetually parting with others that have long contributed to its support. This doctrine is maintained in both the first and second Books of the Poem; and it is probably from this incessant efflux and reflux of elementary atoms that Lucretius supposes the double stream to be derived of which he here speaks.

Quo volvunda micant externi sidera mundi :
Ast alium subter, contra qui subvehat orbem ;
Ut fluvios vorsare rotas, atque haustra, videmus.

Est etiam quoque, utei possit cœlum omne manere
In statione, tamen quom lucida signa feruntur :
Sive, quod inclusei rapidi sunt ætheris æstus,
Quærentesque viam circumvorsantur, et ignes
Passim per cœli volvunt inmania templa ;
Sive, aliunde fluens aliquunde extrinsecus, aër
Vorsat agens igneis ; sive ipsei serpere possunt,

Ver. 537. *Yet, if unmov'd the heavenly orb we deem.*] On this sublime subject, our poet expresses himself with much commendable modesty, and acknowledges his doubts as to the different doctrines inculcated in his own day. He has just given us the explanation of the different phases of the heavens upon the hypothesis that the celestial sphere itself moves uniformly round the earth, and carries the sun, moon, stars, and planets, with it in its diurnal rotation. He now proceeds to another hypothesis, admitted by several philosophers of his own æra, that the celestial sphere itself is at rest, but that the heavenly bodies contained within its circumference revolve, in different and distinct orbits, from a force or power with which each of them is individually endowed. This, indeed, is a much nearer approach to the modern theory of Copernicus, who maintained precisely the same, with the sole exception that, instead of making the whole revolve round the earth, he supposed the whole to revolve round the sun. Lucretius not only adverts to such a conjecture, but delineates, at the same time, the principle upon which such rotatory motions might perhaps be excited and persevered in : and nothing can be more ingenious. Of all the substances that ascended from the vast body of chaos, the atoms which composed the etherial fluid were the most elastic and volatile ; and as such, rose higher than all the rest in the scale of creation : the luminaries of heaven, created from atoms not perfectly equal to themselves in legerity, occupying the second stratum in the celestial sphere. In the formation of the two, he asserts, that a considerable portion of atoms of elastic ether became involved in their ascent towards their own proper standard with those which produced the celestial bodies, and were so extremely entangled as not to be able to liberate themselves from confinement, when these luminous globes were completed. In consequence of which, from their active and elastic property,—their perpetual effort to escape at every possible point—they created a rotatory motion similar to that produced in a watch from the elasticity of its confined spring, or rather, perhaps, to that produced by elastic vapour in our modern steam-machines ; and the involving planet was hence whirled round the centre of the common sphere. What was the principle on which Pythagoras founded his rotatory motion, we know not. It is probable that he had no more satisfied himself on this subject than Copernicus on his revival

Steering the course the gliding planets point,
Themselves hence sole propell'd; while that below
Flows adverse, and the nether sphere drives on,
As drives the tide the mill's unwearied wheel.
Yet, if unmov'd the heavenly orb we deem,
Its fires may still revolve: some restless seeds
Of all-elastic ether, close pent up,
Panting for ease, may agitate their balls,
And round the sky's refulgent concave whirl.
Or air absorb'd extrinsic may, alike,
With restless rage compel them; or themselves

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of the same theory; who certainly appears to have appealed to no principle whatever, but to mere facts alone. For, elegant and harmonious as was the Copernican system on its first publication, it was theory, and nothing beyond: it being reserved for future astronomers, and for Newton, more than all the rest, to demonstrate that this elegant theory was an incontrovertible truth, to give solidity to conjecture, reality to fancy; and to ascertain and discriminate the laws by which it was regulated: laws as comprehensive in their operation as they are simple in their structure, and which equally apply to separate atoms and to congregated worlds. In consequence of which, we feel ourselves compelled to abjure the principle here alluded to by our poet, of confined elastic ether, beautiful as it is in itself, and to embrace that, in its stead, of mutual attraction or gravitation.

Ver. 542. *Or air absorb'd extrinsic——*] Our poet here advances two other hypotheses for the motion of the heavenly luminaries; of which the first is not very different from that just commented upon; it supposes in like manner the existence and propulsion of elastic vapour, but conceives this vapour to be aerial, instead of etherial, which last is a purer and much more volatile fluid than simple air. The other conjecture is that of the Stoics, who contended that the sun, moon, and planets, were perpetually sustained and nourished by the caloric, or seeds of fire that are incessantly streaming forth from the centre of the universe. To this opinion our poet has before alluded in Book I. ver. 1154, to which, and the Note on ver. 1112. of the same Book, the reader, if he please, may return for farther information. I cannot, however, avoid adding in this place the following passage upon the same subject from Cicero de Nat. Deor. ii. "Quid enim? Non eisdem vobis placet omnem ignem pastu indigere, nec permanere ullo modo posse nisi alatur? Ali autem solem, lunam, et reliqua astra, aquis alia dulcibus, alia marinis? eamque causam Cleanthes affert, cur se sol referat, nec longius progrediatur solstitiali orbe, itemque brumali, ne longius discedat a cibo?" "What then? Do you not chuse yourselves to maintain that all fire requires food, and can in no way subsist without nutriment? that the sun, the moon, and the stars are fed, some with fresh, and others with sea-water? And has not Cleanthes positively asserted, that the sun does not pass beyond the boundary of the summer and winter solstices merely because he would then wander too far from his accustomed diet?"

Quo quoiusque cibus vocat, atque invitat, euntes,
Flammea per cœlum pascenteis corpora passim.
Nam quid in hoc mundo sit eorum ponere certum
Difficile est: sed, quid possit fiatque per omne
In variis mundis, variâ ratione creatis,
Id doceo; plureisque sequor disponere caussas
Motibus astrorum, quæ possint esse per omne:
E quibus una tamen sit et hæc quoque caussa necesse est,
Quæ vegeat motum signis; sed, quæ sit earum,
Præcipere haud quâquam est pedetentim progredientis.

Terraque ut in mediâ mundi regione quiescat,
Evanescere paullatim, et decrescere, pondus
Convenit; atque aliam naturam subter habere,
Ex ineunte ævo conjunctam atque uniter aptam

Ver. 549. *Mid various worlds* ——] Epicurus, although he conceived the whole of the stars in the visible heavens to be but an appurtenance to the earth, strenuously contended at the same time for the existence of other worlds in different portions of space: worlds constructed upon laws not essentially varying from those which regulate our own, and equally adapted to the purposes of life and animation. See this advanced in Book II. ver. 1065, and following.

Ver. 560. ——*a nature more attun'd*
To the pure air on which it safe repos'd.] It was for this reason that the antipodal regions were generally, till the day of Velasco de Gama, conceived incapable of habitation: the earth in this department being supposed to be infinitely more soft and fluid, or, in the language of our poet, of a nature more assimilated to the air on which it was imagined to recline. The version of this passage by Creech and Guernier it is impossible to comprehend; they did not understand the original, and have hence given it no extricable meaning.

Camoens, though, consistently with the fashion of his day, he has for the most part followed the Peripatetic theory of an all-embracing *empyreum*, a *primum mobile*, a crystalline, and eight other spheres concentric, and intervolved, has freely borrowed from our

Each chuse his various path as food invites,
Their lucid lamps recruiting through the heavens.
But of these causes which in this world rules
Tis hard t' affirm; whence rather here we teach
What through th' Entire of Nature may subsist
Mid various worlds to various models fram'd,
And strive t' unfold whate'er may haply bend,
In different systems, different stars, than aught
Assign precise for either. One alone
Of those now number'd, one sole cause propels
The stars of earth, but which that cause the sage
Yet dares not name, who treads with cautious foot.
But, that this mass terrene might hold unmov'd
The world's mid regions, its excess of weight,
From its own centre downwards, gradual ceas'd:
And all below a different power assum'd
From earliest birth, a nature more attun'd

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poet whenever his descriptions would apply to his purpose. Hence the following stanza; which in Mr. Mickle's version is made to approximate still nearer to the Epicurean system than was even intended by the Portugueze bard himself:

Em todos estes orbes, differente
Curso verás, nũs grave, e noutros leve:
Ora fogem do centro longamente,
Ora de terra estam caminho breve,
Bem como quis o Padre omnipotenté
Que o fogo fez, ed o ar, o vento e neve,
Os quaes verás, que jazem mais adentro,
E tem co' o mar a terra per seu centro.

Lusiad x. 90.

These various orbs, behold, in various speed
Pursue the journeys at their birth decreed.
Now, from the centre, far impell'd, they fly,
Now, nearer earth, they sail a lower sky,
A shorten'd course. Such are the laws imprest
By God's dread will, that will for ever best.
The yellow earth, the centre of the whole,
There lordly rests, sustain'd on either pole:
The limpid air enfolds in soft embrace
The pond'rous orb, and brightens o'er her face.
Here, softly floating o'er th' etherial blue,
Fring'd with the purple and the golden hue,
The fleecy clouds their swelling sides display;
From whence, fermented by the sulph'rous ray,

Partibus aëriis mundi, quibus insita vivit.
Propterea, non est oneri, neque deprimit auras;
Ut sua quoique homini nullo sunt pondere membra,
Nec caput est oneri collo, nec denique totum
Corporis in pedibus pondus sentimus inesse.
At, quæquomque foris veniunt, inpostaque nobis
Pondera sunt, lædunt permulto sæpe minora:
Usque adeo magni refert, quid quæque queat res.
Sic igitur tellus non est aliena repente
Adlata, atque auris aliunde objecta alienis;
Sed pariter primâ concepta ab origine mundi,
Certaque pars ejus; quasi nobis membra videntur.

Præterea, grandi tonitru concussa, repente
Terra, supra se quæ sunt, concutit omnia motu;
Quod facere haud ullâ posset ratione, nisi esset
Partibus aëriis mundi, cœloque, revincta:
Nam communibus inter se radicibus hærent,
Ex ineunte ævo conjuncta, atque uniter aucta.

The lightnings blaze, and heat spreads wide and rare;
And now, in fierce embrace, with frozen air,
Their wombs comprest, soon feel parturient throes,
And white-wing'd gales bear wide the teeming snows.
Thus cold and heat their warring empires hold,
Averse, yet mingling, each by each controll'd,
The highest air, and ocean's bed they pierce,
And earth's dark centre feels their struggles fierce.

Ver. 574. *When, too, with thunder shake the realms above*
Earth feels the dread concussion, and rebounds;]
Our philosophic bard enumerates this, among several other phænomena, to prove the connexion between the solid substance of the earth, and the elastic fluid

To the pure air on which it safe repos'd.
Hence earth to air no burden proves, nor deep
Grinds it with pressure; as the limbs no load
Feel to the body, to the neck no weight
Th' incumbent head, nor e'en the total form
Minutest labour to the feet below:
While yet each foreign substance, though but light,
Grieves oft severely instant as impos'd;
So vast th' importance things their like should join.
For from a distance earth was never brought,
And into air at once abruptly hurl'd;
But both sprang equal when the world first rose,
Each part of each as limb with limb combines.
When, too, with thunder shake the realms above
Earth feels the dread concussion, and rebounds;
Effect which ne'er could flow did nought of tie
Bind it to ether, and the world of air:
For each to each, as with commingled roots,
Cleave from their birth, congenial, and conjoin'd.

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that surrounds it. He has not been clearly understood by any of his translators. Even Marchetti himself is confused, and unintelligible:

Accade in oltre
Ch' ella da grave tuon scossa repente,
Tutto ciò ch' ell' ha sopra, agita e scuote.

But Creech has wandered still farther from our poet's meaning, and has given an idea perfectly opposite to what he both intended, and has obviously exprest:

Besides, the shaking earth does often move
The upper air, disturbing all above.

Such is his version of the following, which constitutes the original text, ver. 551.

Præterea, grandi tonitru concussa, repente
Terra, supra se quæ sunt, concutit omnia motu.

Nonne vides etiam, quam magno pondere nobis
Substineat corpus tenuissima vis animaï ;
Propterea, quia tam conjuncta, atque uniter apta, est ?
Denique, jam saltu pernici tollere corpus
Quis potis est, nisi vis animæ, quæ membra gubernat ?
Jamne vides quantum tenuis natura valere
Possit, ubi est conjuncta gravi cum corpore ; ut aër
Conjunctus terris, et nobis est animi vis ?
Nec nimio solis major rota, nec minor ardor,
Esse potest, nostris quam sensibus esse videtur.
Nam, quibus e spatiis quomque ignes lumina possunt
Adlicere, et calidum membris adflare vaporem ;
Nihil ipsa intervalla in sis de corpore librant

Ver. 588. *Nor less, nor larger much the solar wheel*] Epicurus himself spoke with as much diffidence upon this subject as Lucretius has done, and has met with a merited degree of praise for his modesty from Des Coutures : " il a parlé," says he, " plus modestement que tous les philosophes ; il a dit ce qu' il a crû du soleil, mais sans rien assurer positivement." And he refers us, as does Mr. Wakefield also, for a proof of this diffidence, to the express testimony of Plutarch, de Placit. Philosoph. lib. ii. c. 21. Επικουρος παλιν φησιν,—(ειναι τον ἡλιον) τηλικουτον, ἡλιος φαινεται, η μικρῳ μειζον, η ιλαττον. " Epicurus, moreover, asserts, that the sun may probably be much of the same magnitude and nature as he appears to be, or he may be a little less, or a little larger." And in a passage immediately antecedent, he declares that the opinions of any of the philosophers may be true for any thing he is able to decide to the contrary. These opinions undoubtedly were extremely various ; for while Heraclitus contended that the sun's diameter was a single foot, Anaxagoras maintained that it was as large as the country of Peloponnesus ; Anaximander, that it was of the precise dimensions of the earth itself ; Macrobius, following the calculation of the Egyptians, that it was eight times as large ; Eratosthenes, that it was seven-and-twenty times ; Cleomedes, three hundred times ; Hipparchus, upwards of a thousand times ; and Possidonius, nearly sixty thousand times. While amidst this infinite diversity of opinion, Archelaus, Plato and Cicero, modestly declared, with Epicurus and Lucretius, that they knew nothing about the size of the sun whatever.

Nor is this ignorance and opposition of belief among the Greek and Roman philosophers to be wondered at : for, with all our boasted improvement in mathematical science and mathematical instruments, we have even now acquired no precise knowledge of the comparative dimensions of the sun, and at the same time, are totally ignorant of his substance. Copernicus, Kepler, Cassini, and De la Hire, have all

See'st thou not, ceaseless, how th' attenuate soul
Bears up the pond'rous body, since alike
Conjoin'd, congenial; when the total frame
Leaps up abrupt, whence flows the salient force
But from the soul the members that commands?
See'st thou not hence, then, what the subtlest power
May compass when with pond'rous frames conjunct,
As earth with air, or with the body mind?
Nor less, nor larger much the solar wheel
Measures than meets the view: for be the space
Of utmost length through which aught igneous throws
Its liquid heat, its lustre o'er the limbs,
While these yet reach us it can ne'er so far

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differed with respect to the former; and with respect to the latter, while Gallileo, Newton, and Buffon, are still contending in their writings that he is an immense mass of luminous and culinary fire, Euler and De Luc are denying him to be light or fire in any shape, and Herschell is maintaining him to be an opake body altogether. In the midst of such differences of conjecture among the truly scientific, we ought not to be surprised, therefore, that pretenders to astronomy should have offered more extraordinary conceptions still. The mechanic, to whom I have just adverted in the Note on ver. 529. of the present Book, as the contriver of a beautiful, and for the most part, accurate orrery of the celestial sphere upon the principles of the Ptolemaic system, ignorantly contended that the sun was very little larger than his apparent size, although he wisely forbore to decide as to his exact dimensions: while not more than six or seven years ago another adventurer, of equal penetration, attempted to demonstrate, that, so far from being a body of fire, or even an opake body, the sun is neither more nor less than a large crystalline body of ice. See "A Treatise on the sublime Science of Heliography," by Charles Palmer, 8vo. Printed for Ginger.

In reality, notwithstanding there is some disagreement in calculating the sun's diameter between the most able astronomers of modern times, this disagreement has not varied much more than two degrees out of two and thirty, from the time of Ptolemy himself, to that of Ferguson, whose calculation was drawn from the celebrated transit of Venus. The sun's diameter is now generally admitted to measure about eight hundred and ninety thousand English miles; in his aggregate bulk he is supposed to be about five hundred and thirty nine times and a half as large as all his own planets put together. And from the uniform variation of his maculæ, or spots, he is ascertained to have a revolution round his own axis in about twenty-seven days and twelve hours. With regard to this rotary motion, however, it was calculated by Kepler to be completed in twenty-four hours alone, while Otto de Guerrie maintained, that it recurred every instant.

Flammarum, nihil ad speciem est contractior ignis.
Proinde, calor quoniam solis lumenque profusum
Perveniunt nostros ad sensus, et loca fulgent;
Forma quoque hinc solis debet filumque videri,
Nihil adeo ut possis plus, aut minus, addere vere.
Lunaque, sive notho fertur loca lumine lustrans,
Sive suo proprio jactat de corpore lucem;
Quidquid id est, nihilo fertur majore figurâ,
Quam nostris oculis, quâ cernimus, esse videtur.
Nam prius omnia, quæ longe semota tuemur
Aëra per multum, specie confusa videntur,
Quam minui filum: quapropter luna necesse est,
Quandoquidem claram speciem certamque figuram
Præbet, ut est oris extremis quomque notata,
Quanta quoque est, quanta, hinc nobis videatur in alto.
Postremo, quosquomque vides hinc ætheris igneis,

Ver. 597. *Thus too the moon, shine she with borrow'd blaze,*

Or pour essential splendour from herself,——]

The sun was not supposed, by our poet, to vary much from his apparent magnitude; the real and apparent magnitude of the moon he conceived to differ as little. The reasons he offers are those of Epicurus, which are yet preserved as his in Diogenes Laertius. Lucretius mentions two opinions concerning the moon, which were advanced by different philosophers in his own era, the one, that the light she dispenses is intrinsic, and her own; the other, that it is foreign, and totally borrowed from the sun. He modestly forbears to decide on either of them, though in the prosecution of the poem he seems more inclined to the latter, which indeed was the more general belief among the Greek and Roman sages. Diogenes Laertius asserts it to have been that of Anaximander, who affirmed, says he, ii. 1. την τε σελήνην ψευδοφανη, και απο ἡλιου φωτιζεσθαι: "that the moon shone with spurious light, and was illuminated from the sun." Such too was the belief of Cicero and Macrobius: and consistently herewith are the following verses of Catullus ad Dianam xxxiv. 15.

Tu potens Trivia, et *notho* es
Dicta *lumine Luna*.

Potent Trivia is thy name
Luna, deck'd with *borrow'd flame*.

This, more common belief of the ancients, the as-

Lie that the distance should curtail its size.
Since, then, the sun flings down his fires, profuse,
His light on all things, he must still exist
Nor less, nor larger than the vision views.

Thus too the moon, shine she with borrow'd blaze,
Or pour essential splendour from herself,
Moves with the magnitude the sight surveys.
For all discern'd through tracts of air remote
Grows first confus'd, and indistinct of form
Ere yet its size diminish; but the moon,
Since trac'd precise through e'en her utmost orb,
Must prove the sphere the sight descries sublime.

Th' etherial stars, moreo'er,—since lights terrene

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tronomers of modern times have proved to be incontrovertibly true by attentively observing the moon's different phases. Her diameter is calculated at 2180 miles: her bulk at something less than a forty-ninth part of that of the earth; her distance from the earth's centre 240,000 miles. And in the course of her orbit she is ascertained to move at the rate of $229\frac{63}{100}$ miles an hour; hereby completing her menstrual revolution in 27 days 7 hours 43 minutes.

Ver. 604. *Must prove the sphere the sight descries sublime.*] The verse in the original, numbered 584, is read differently, though the difference is not so great as to produce much variation in the versions. In Faber, Creech, and the common lections, we meet with it thus:

Quanta hæc cunque fuat, tanta hinc videatur in alto.

Mr. Wakefield gives it as follows, and is supported by the general concurrence of the best authorities:

Quanta *quoque est*, *quanta*, hinc *nobis* videatur in alto.

And as an instance of similar phraseology, he has referred us, with his usual promptitude, to the following verse of Terence, Adelph. iii. 3. 40.

Tu *quantus*, *quantus*, nihil nisi sapientia es; Ille somnium.

Quandoquidem, quosquomque in terris cernimus igneis,
Dum tremor est clarus, dum cernitur ardor eorum,
Perparvum quiddam interdum mutare videtur
Alteram utram in partem filum, quo longius absit;
Scire licet, perquam pauxillo posse minores
Esse, vel exiguâ majores parte, brevique.
Illud item non est mirandum, quâ ratione
Tantulus ille queat tantum sol mittere lumen,
Quod maria, ac terras omneis, cœlumque, rigando
Conpleat, et calido perfundat cuncta vapore.
Nam licet hinc mundi patefactum totius unum
Largifluum funtem scatere, atque erumpere lumen;
Ex omni mundo quâ, sic elementa vapore
Undique conveniunt, et sic conjectus eorum
Confluit, ex uno capite hicc' ut profluat ardor.
Nonne vides etiam, quam late parvus aquaï
Prata riget fons interdum, campisque redundet?
Est etiam quoque, utei non magno solis ab igni
Aëra percipiat calidis fervoribus ardor;
Obportunus ita est si forte et idoneus aër,
Ut queat adcendi, parvis ardoribus ictus:
Quod genus, interdum segetes stipulamque videmus
Adcidere ex unâ scintillâ incendia passim.
Forsitan et roseâ sol alte lampade lucens
Possideat multum cæcis fervoribus ignem

Receding gradual, while they yet maintain
Their lambent fires, their radiance unimpair'd,
Scarce obvious dwindle,—must themselves alike
In size scarce vary from the form they show.

Nor deem it strange that so minute a sun
Should pour forth flame sufficient heaven to fill,
And earth, and ocean, and whate'er exists
Tinge with its glittering dew; for, from abroad
The myriad seeds of fire dispers'd at large
Through all things, here as to their fountain flow,
And hence well forth o'er all th' exulting world
In boundless flood: see'st thou how small a spring
Feeds with its liquid treasures meads, full oft,
Of amplest breadth, and all their glebe o'erflows?

Or the small globe of solar flame, perchance,
Th' effusive air may fire, than aught besides
Ignited easier by th' impinging ray;
As oft some casual spark the field enflames
Of full-ripe corn, or stubble crisp, and sere.

Or haply stores, impalpable to sight,
Of latent heat the rosy lamp surround,

Circum se ; nullo qui sic fulgore notatus,
Æstifer, in tantum radiorum exaugeat ictum.
Nec ratio solis simplex ac recta patescit,
Quo pacto, æstivis e partibus, Ægocerotis
Brumaleis adeat flexus ; atque, inde revortens,
Canceris ut vortat metas ad solstitialeis :
Lunaque mensibus id spatium videatur obire,
Annua sol in quo consumit tempora cursu :
Non, inquam, simplex hiis rebus reddita caussa est.
Nam fieri, vel cum primis, id posse videtur,
Democriti quod sancta viri sententia ponit :

Ver. 616. *And hence swift forth o'er all th' exulting world*
In boundless flood :——] Thus Cowper :

The verdure of the plain lies buried deep
Beneath the *dazzling deluge.*

Task, v. 21.

See also the same image beautifully imitated in Note on ver. 294. of the present Book.

Ver. 628. *Nor trace we clear by what unvarying law,*] This diffident and commendable dubiosity was not confined to himself, or his own age. We meet with a similar hesitation in Milton :

But whether thus these things, or whether not,
Whether the sun, predominant in heaven,
Rise on the earth, or earth rise on the sun,
He from the east his flaming road begin,
Or she from west her silent course advance
With inoffensive pace, that spinning sleeps
On her soft axle, while she paces even,
And bears thee soft with the smooth air along,—
Solicit not thy thoughts *with matters hid.*

Par. Lost, viii. 159.

The *spinning* of the earth *on her axle*, here adverted to, was contended for by Empedocles and other Grecian philosophers, whose opinions are thus glanced at by Butler :

Some hold the heavens like a top
Are kept by circulation up ;
And wer't not for their wheeling round,
They'd instantly fall to the ground ;
As sage Empedocles, of old,
And from him modern authors hold.

Hudibr. II. iii. 871.

Ver. 631. *Reclimbs the heavens, and, from the red crab, pours*
The sultry solstice ;——] To the same effect, and with an eye obviously directed to our poet, Manilius :

Alter, ad extremi decurrens sidera cancri,
In quo consummat Phœbus, lucemque, moramque,
Tardaque per longos circumfert lumina *flexus*
Æstivi medio nomen sibi sumit ab æstu :
Temporis et titulo potitur ; *metamque* volantis
Solis et extremos designat fervidus actus. i. 566.

Whence amply draws it its eternal blaze.

Nor trace we clear by what unvarying law,
When summer fades, the sun his downward path
Bends tow'rds the wintry goat, and thence, in turn,
Reclimbs the heavens, and, from the red crab, pours
The sultry solstice; or, why seems the moon
O'er the same space to voyage every month
The toiling sun claims twelve t' achieve complete.
These nought unfolds decisive; for the dogm
Of sage Democritus we, first, may deem

Down to the crab's remotest stars devolves
This second circle; where, his light and length
Phœbus consummates, and through ling'ring curves
Wheels his slow lustre—*torrid* here surnam'd
From the vast *torrents* of his midmost heat.
His fluent path here bounds he, and prescribes
The farthest limits of his sultry race.

Thus, also, Polignac, when unfolding the Copernican system:

Cur autem æstivo tam longi tempore soles,
Quæve mora hybernas producat pigra tenebras;
Cur non æquales prius, exæquentur in ipso
Veris et Autumni reditu; quæ causa duobus
Solstitiis valeat solemnem imponere morem,
Ac veluti metam in tropicis finemque vagandi;
Cur Æstas et Hyems, Ver, Autumnusque recurrant,
Sedulas exponam.

Anti-Lucr. viii. 964.

Whence the long suns that sway the summer months,
Whence wintry darkness from their slow delay;
Unequal else, whence equal shine and shade
In Spring and Autumn: what the mighty cause
To one same code that either solstice bends,
And bars all variance from the tropic climes;
Whence Winter, Summer, Autumn, Spring revolves,
Cautious, I now develop.

Ver. 631. ——*and, from the red crab, pours*
The sultry solstice;——] Thus Thomson:

And cancer *reddens* with the solar blaze.

Summer, 44.

Ver. 635. ——*the dogm*
Of sage Democritus——] I have already observed, in Note on Book II. v. 1065. of this Poem, that the first idea that seems to have been maintained of the shape of the world at large, was that of an immense but irregular plane, over which the celestial luminaries ascended every morning; and, having projected a regular and beautiful arch by their path through the atmosphere, sunk to rest every night either in the ocean or behind the mountains. In process of time, however, the figure of the earth was conceived to be globular, and the belief of different spheres in the heavens was in consequence introduced, and laid the basis for the whole of the Ptolemaic theory. These different spheres were, as we may

Quanto quæque magis sint terram sidera propter,
Tanto posse minus cum cœli turbine ferri:
Evanescere enim rapidas illius, et acreis
Inminui subter, vireis; ideoque relinqui
Paullatim solem cum posterioribus signis,
Inferior multum quod sit, quam fervida signa:
Et magis hoc lunam; quanto demissior ejus
Cursus abest procul a cœlo, terrisque propinquat,
Tanto posse minus cum signis tendere cursum.
Flaccidiore etiam quanto jam turbine fertur,
Inferior quam sol, tanto magis omnia signa
Hanc adipiscuntur circum, præterque feruntur.
Propterea fit, ut hæc ad signum quodque revorti

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naturally conceive, in the first instance, very few and simple, and, perhaps, the hypothesis of Democritus here adverted to by Lucretius, may have been the earliest erected upon this foundation. It supposes the existence of not more than three: one comprizing the orbit of the moon, and situated nearest the earth; a second, of larger diameter, inclosing it, in which the sun and planets revolved together; and a third, encompassing the two former, placed in the sublimest boundary of the heavens, and constituting the orbit of the starry constellations. This simple hypothesis was undoubtedly well calculated to explain several of the phænomena of the celestial bodies, but it would not explain many: and other spheres or orbits were, in consequence, progressively added by future astronomers, till, in the age of Fracastorio, they amounted to not less than seventy-four, and the system at length fell a sacrifice to its own confusion and complexity. One of the easiest diagrams of this hypothesis may be obtained by throwing a stone into a still sheet of water. Hence the following verses of Dr. Donne:

If, as in water stirr'd, more circles be
Produc'd by one, love such additions take,
Those, like so many spheres, but one heaven make,
For they are all concentric unto thee.

Love's Growth.

A simile which has been obviously borrowed by Mr. Pope, in the ensuing admirable lines of his Essay on Man:

God loves from whole to parts; but human soul
Must rise from individuals to the whole.
Self-love but serves the virtuous mind to wake,
As the small pebble stirs the peaceful lake.
The centre mov'd, a circle strait succeeds,
Another still, and still another spreads.

Haply efficient, that the radiant signs,
As nearer earth affix'd, less rapid far
Roll in the heaven's vast whirlpool, heaven below
Gradual its race relaxing; whence the sun,
And solar satellites must more and more
Be backwards left, deserted, since full deep
Lie they beneath the blue etherial fires:
While the bright moon lies deeper still, and hence
Still powerless more, as nearer earth's low bounds,
To match the speed the loftier signs display.
As tardier moves she in her proner path
Than moves the sun, as swifter o'er her rolls
The wond'rous vortex of sublimest heaven.
Whence seems she speedier through each sign t' advance,

Friend, parent, neighbour, first it will embrace,
His country next, and next all human race:
Wide, and more wide, th' o'erflowings of the mind
Take every creature in of every kind;
Earth smiles around, with boundless beauty blest,
And heaven beholds its image in his breast.

Ver. 644. *While the bright moon——*] At the time when Milton composed his celebrated epic poem, the Copernican system had not acquired a sufficient degree of countenance to induce this inimitable bard to embrace it cordially. Like Lucretius, he is perpetually hesitating in his belief; and yet we manifestly perceive a preponderance for the old system of Ptolemy: thus, in verses not dissimilar from those of the text:

Moon! that now meet'st the orient sun, now fly'st
With the fixt stars, *fixt in their orb that flies;*
And ye five other wandering fires! that move
In mystic dance, not without song, resound
His praise. B. v. 175.

Ver. 645. *Still powerless more, as nearer earth's low bounds,*
To match the speed the loftier signs display.] In a very spirited and elegant hymn to the Genius of Odours, by Lebearez, an Arabian poet, we meet with a passage so perfectly consonant with the general tenour of that now before us, that I cannot avoid adding Sir W. Jones's version of it:

——*The moon slow glides*
Her pearly bark across *the tides*
Which fill the blue expanse of heaven,
In many a shining current driven.

Mobilius videatur, ad hanc quia signa revisunt.
Fit quoque, ut e mundi transvorsis partibus aër,
Alternis, certo fluere alter tempore possit,
Qui queat æstivis lunam detrudere signis
Brumaleis usque ad flexus, gelidumque rigorem:
Et qui rejiciat gelidis ab frigoris umbris
Æstiferas usque in parteis, et fervida signa.
Et ratione pari solem stellasque putandum est,
Quæ volvunt magnos in magnis orbibus annos,
Aëribus posse, alternis, e partibus ire.
Nonne vides etiam divorsis nubila ventis
Divorsas ire in parteis, inferna supernis?

Ver. 652. *Or different airs, perchance, at times defin'd,*] The poet is here exhibiting the opinion of Anaximenes, as we learn from Plutarch, Placit. Philos. ii. 23. Αναξιμενης, ὑπο πεπυκνωμενου αερος και αντιτυπου εξωθεισθαι τα αστρα. This opinion is obviously founded upon the supposition of monsoons existing in the higher regions of the atmosphere, of equal permanence and regularity with those traced by modern navigators in different parts of the Atlantic and Pacific oceans. See Note on ver. 661. of the present Book.

Ver. 654. *This the moon driving from the summer fires*] In all the common editions, the term here rendered moon, is *solem*, "sun," and thus, again, the word *sun* in ver. 658. is, in like manner, rendered *lunam*, "moon." This double error was first detected by Bentley; who proves, from what immediately occurs in ver. 660, which certainly cannot be said to apply to the moon, that the transposition now adopted was the original reading. Mr. Wakefield, as might naturally be expected, has availed himself of this reading, and supported the propriety of the change by parallel passages from other poets. See Note on ver. 660.

Ver. 658. *Thus moves the sun too,——*] In all the common editions, as I have already observed in Note on ver. 654, we here meet with *lunam*, "the moon." To the above Note I refer the reader for the change.

Ver. 660. *Roll their vast rounds, and fill the mighty year.*] This verse will not apply to the common readings, in which the term, two lines above, here translated *sun*, "*solem*," is written *moon*, "*lunam*;" and demonstrates the propriety of Bentley's alteration. In the original, it occurs thus:

Quæ volvunt magnos in magnis orbibus annos.
Ver. 643.

And the verse is conjectured by Creech, but idly and inconsiderately, to signify either the revolutions of the superior planets Mars, Jupiter, and Saturn, or the great Platonic period of 25,579 sydereal years, in which it was supposed that the stars would completely run through all the degrees of the ecliptic,

While o'er herself each sign but fleeter flies.
Or different airs, perchance, at times defin'd,
Rush o'er the converse hemispheres of earth;
This the moon driving from the summer fires
Down tow'rds the wintry arc, and realms of ice;
And that, alternate, raising her again
From frost's drear solstice to the sultry signs.
Thus moves the sun too, haply, and the stars
Alternate thus, by converse airs propell'd,
Roll their vast rounds, and fill the mighty year.
See'st thou not oft, from different winds, the clouds
Above, borne different from the clouds below?

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and once more exhibit themselves in the same relative positions; or, as Polignac has it in verse:

Annorum tredecim bis millia tota necesse est
Effluxisse prius, repetant quam sidera sedem,
Primævusque situs toti reddatur Olympo.
Anti-Lucr. viii. 424.

Full thirteen thousand years twice told must roll
Their mighty round, ere heaven resume its face,
And every star its primal station take.

But that the poet is here merely describing the revolution of the solar year, or the sun's path through the zodiac, we may accurately determine from the following parallel delineation of Virgil:

Interea *magnum* sol *circumvolvitur annum.*
Meanwhile the sun rolls round *the mighty year.*

To which, if confirmation were wanting, it might be obtained from the ensuing passage of Seneca:

Hic, qui, sacris pervius astris
Secat obliquo tramite zonas,
Flectens *longos Signifer annos*
Lapsa videbit sidera tabens.
Thyest. 847.

This zodiac thick with spangles sown,
That cuts obliquely every zone,
Bends the *long year*, all variance bars,—
Shall fade amid the fading stars.

Ver. 661. *See'st thou not oft, from different winds, the clouds*
Above, borne different from the clouds below?] This phænomenon has been long confirmed and accounted for by Dr. Halley. Upon his theory, the primary current of wind is produced by the rarefaction of the air from the augmenting rays of the sun, as he ascends every morning, and consequently, with himself, must necessarily flow from east to west: a direction which, when once begun, must with equal necessity continue for a considerable portion of time after his absence, upon the common principles of hydrostatics; and which might account for its continuance through the night, till his return in the morning. Upon this theory, therefore, Dr. Halley maintains that, were the surface of the earth perfectly level and monotonous, there would be but one current of wind blowing universally from east to west. And thus we

Quî minus illa queant per magnos ætheris orbeis
Æstibus, inter se divorsis, sidera ferri?
At nox obruit ingenti caligine terras,
Aut, ubi de longo cursu sol ultima cœli
Inpulit, atque suos ecflavit languidus igneis,
Concussos itere, et labefactos aëre multo;

actually find it in considerable and unincumbered portions of the Atlantic and Ethiopic oceans. But, in consequence of the perpetual obstructions of continents, mountains, and soils of different temperatures, we must inevitably meet with a great variety of winds in a great variety of places. Nevertheless, this primary easterly wind is by far the most prevalent over the world at large. At the equator, it is, moreover, perceived strongest; for in this quarter the air is much more rarefied than in any other latitude: while, at the same time, on its north side, it inclines to a northward direction; and on its south, to a southward.

But if this south-easterly or north-easterly wind blow over a large tract of sand, as the deserts of Lybia, for example, where the reflection of the sun's beams produces an intense degree of heat, the column of air placed immediately on the surface of the sand will be so rarefied as to expand in all directions, yet principally upwards; and the adjacent air from the coldest country will rush forwards to fill the comparative vacuum hereby produced; and the consequence will often be, that whilst, from the course of the sun, the superior air, that lies beyond the reach of this inferior heat and rarefaction, flows in one direction, and carries the clouds that are horizontal with itself in the same path, the air below will have a contrary tide, and propel the clouds situate in its own level to the course it takes itself. And hence the origin of all monsoons or trade-winds, which, but for the accidental circumstance of local inferior heats, would undeviatingly blow from the east, and which uniformly do so as soon as such local antagonists cease to operate.—A similar opposition of currents is justly suspected in the ocean itself. See Note on ver. 526. of the present Book.

Ver. 665. *Then night, at length, the world with darkness shrouds,*
Or since the sun, &c.——] To the same effect Epicurus himself, as preserved in Diogenes Laertius, x. 92: Ανατολας και δυσεις ηλιου, και σελκνης, και των λοιπων αστρων, και κατα αναψιν γινεσθαι δυνασθαι, και κατα σβεσιν, τοιαυτης ουσης περιστασεως καθ' ετερους τινας τοπους, ωστε τα προειρημενα αποτελεισθαι.—.

Of the two opinions here stated by our poet, that which represents the sun as encircling the earth, and producing the dawn by his regular return to the east every morning, was most generally accredited, and continued indeed to be so as long as the Ptolemaic system was accredited itself. The other, which delineates the solar orb as worn out and perishing at the termination of the day, from the violence of his own fire, and again periodically renewed in the morning, was, nevertheless, supported by no small number of the sages of Greece and Rome, and is attributed to Xenophanes as its author; who added also that, in like manner, the moon and stars were ignited bodies, concentrated and enkindled at the close of the day, and extinguished every morning. Heraclitus strenuously supported the same opinion: "the sun," said he, "is renewed every day." Ηελιος νεος εφ' ημερη εστι. And, strange as such a doctrine may appear, in the present age, it is not, perhaps, more wild or incongruous than that which was universally current, till within the last fifty years, that the sun was a luminous body of culinary fire, which had been for ever burning from its first creation, without any diminu-

Why then, alike, may different streams of air
Bend not the stars, the planets through their paths?
Then night, at length, the world with darkness shrouds,
Or since the sun, at heaven's remotest verge,
Tir'd with his toil, his remnant lamp blows out,
Curtail'd already by the race achiev'd

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tion, or even change. According to the literal interpretation of the sacred Scriptures, the sun, at the time appointed for his formation, which was the morning of the fourth day, was created instantaneously by the rapid efflux of the particles of light and heat to one common point, whose concentration and conglobation formed his radiant body. And the phænomenon which is thus represented as having occurred on the fourth morning of creation, these philosophers maintained was repeated in the same precise manner every morning. It is to such opinion Horace manifestly alludes in the following verses, in his Carmen Seculare:

Alme Sol! curru nitido diem qui
Promis et celas, aliusque et idem
Nasceris.

Sun benign! whose car of flame
Opes and shuts the punctual day,
Another born, yet still the same—

Gassendi has endeavoured to explain this opinion of Xenophanes, by supposing him to believe, that as the ocean encompassed the earth, the sun was actually extinguished every evening by its waters in the west, and returned all along through the waves in a northward direction to the east, where he again ascended, and was re-kindled every morning. Nothing, however, can be more wild and unphilosophic than such an interpretation; and nothing can be farther from the express declaration of our poet. He delineates the sun as gradually augmenting in bulk and vigour, till he has gained his meridian maturity; after which he, as progressively, diminishes both in power and substance, till, at length, he dies away, and is absolutely dissipated: the expression in the following line,

Tired with his toil his remnant lamp blows out.

And in the original, ver. 651:

——suos efflavit languidus igneis,

is entirely figurative, nor more figurative than beautiful: it is thus imitated by Virgil:

——alto se gurgite tollunt
Solis equi, lucemque elatis naribus efflant.

Æn. xii. 114.

Now from the stream the sun's bright coursers stray,
And with *wide nostrils kindle up* the day.

The whole passage, however, as M. De Lille has anticipated me in observing, is still more fully imitated in his Georg. i. 247, in which we clearly perceive that Virgil, who had at this time abandoned the Epicurean philosophy, doubted whether he should admit, with the Stoics, of antipodal inhabitants, and an antipodal sky:

Illic, ut perhibent, aut intempesta silet nox
Semper, et obtentâ densantur nocte tenebræ;
Aut redit à nobis Aurora, diemque reducit:
Nosque ubi primus equis oriens afflavit anhelis,
Illic sera rubens accendit lumina Vesper.

There, as they say, deep silence loves to rest,
And endless night in ten-fold gloom oppress;
Or, from our hemisphere, the morning ray
Returns, alternate, and restores the day;
And when to us the orient car succeeds,
And o'er our climes have breath'd its panting steeds,
There ruddy Vesper, kindling up the sky,
Casts o'er the glowing realms his evening eye.

I have quoted from Dr. Warton's version, with a trifling variation in the first two verses.

Aut, quia sub terras cursum convortere cogit
Vis eadem, supra quæ terras pertulit, orbem.

Tempore item certo roseam Matuta per oras
Ætheris auroram defert, et lumina pandit;
Aut, quia sol idem sub terras ille, revortens,
Anticipat cœlum, radiis adcendere tentans;
Aut, quia conveniunt ignes, et semina multa
Confluere ardoris consuerunt tempore certo,
Quæ faciunt solis nova semper lumina gigni.
Quod genus, Idæis fama est e montibus altis

Ver. 672. *Then the young morning, too,——*] As, in the present version, the original is simple allegory, and the sketch is exquisite, ver. 655.

Tempore item certo roseam Matuta per oras
Ætheris auroram defert, et lumina pandit.

But both Des Coutures and Marchetti have converted it into Grecian mythology, and certainly without any improvement of the passage. Thus the former: "C'est ainsi que la fille de Cadmus embellit tous les matins les confins de l'air," &c. And thus the Italian translator:

Ma del vecchio Titon la biancha amica
Con la fronte di rose, e co' l crin d'oro, &c.

Ovid is by far more true to the picture of Lucretius in the following conplet:

——ecce! vigil rutilo patefecit ab ortu
Purpureas *Aurora fores*, et plena *rosarum*
Atria. Met. ii. 112.

Lo! from the east the watchful Dawn discloses
Her purple gates, and chambers fill'd with roses.

With these may be agreeably compared the following description of Homer, in some degree inadequately rendered by Mr. Pope:

ηριγενεια φαινη ροδοδακτυλος ηως Il. A.

The *rosy-finger'd dawn* the *new-born day*
Now usher'd.

Not widely dissimilar to the following, and a variety of other places in the Par. Lost:

——see the morn begins
Her rosy progress smiling. xi. 173.

This gradual advance of the dawn towards the full strength and perfection of noon-day, is most admirably employed by Camoens as a simile to illustrate the progressive augmentation of an unopposed enemy:

Era quanto he fraca a forca desta gente,
Ordena como em tudo se resista,
Porque quando o Sol sae, facilmente
Se pode nelle por à aguda vista;
Porem depois que sobe claro, e ardente,
Se a agudeza dos olhos o conquista

Through long concussive air; or the same power
Still drives his restless axle earth beneath,
That, through the day, propell'd his orb sublime.
Then the young MORNING, too, at hour precise
Leads through th' etherial realms the rosy dawn,
New light diffusing; either since the sun,
Th' inferior earth encompass'd, now once more
Tries his fresh strength, and with projected rays
Anticipates his orb; or that the seeds
Of embryo-fires, in full divan conven'd
At punctual periods in the purple east,
Gradual condense, and rear the solar blaze.
For thus, we learn, from IDA's top survey'd,

Tao cega fica, quando ficareis
Se raizes criar lhe não tolheis. CANT. viii. 50.

Thus exquisitely translated by Mr. Mickle:

Then, while kind Heav'n th' auspicious hour bestows,
Let ev'ry nerve their infant strength oppose.
When softly usher'd by the milky dawn,
The sun first rises o'er the daisied lawn,
His silver lustre, as the shining dew
Of radiance mild, unhurt the eye may view:
But when on high the noon-tide flaming rays
Give all the force of living fire to blaze,
A giddy darkness strikes the conquer'd sight
That dares, in all his glow, the Lord of light.

Ver. 680. *Gradual condense, and rear the solar blaze.*] Hence the humorous description of Butler, alluding to the opinion of Anaxagoras as to the size of the sun, on which see Note on ver. 588. of the Book before us:

For Anaxagoras long agone
Saw hills as well as you, i' th' moon,
And held the sun was but a piece
Of red-hot iron as big as Greece.
HUDIB. II. iii. 737.

For maintaining the sun to be of this *immense bulk*, however, the Grecian philosopher encountered as much persecution as Galileo, for asserting his immobility.

Ver. 681. *For thus, we learn, from* IDA's *top survey'd,*
Seem they,——] Ida was the name of two mountains of much celebrity in ancient Greece: one in the isle of Crete, and one in Phrygia. It is to the latter our poet alludes in the present instance, and which was rather a chain of mountains, running through the whole country of Troas, than a single acclivity. The loftiest part of this ridge of hills is termed by Strabo Mount Gargarus, and it is to this point Lucretius directs our attention for the

Disparsos igneis orienti lumine cerni;
Inde coire globum quasi in unum, et confacere orbem.
Nec tamen illud in hiis rebus mirabile debet
Esse, quod hæc ignis tam certo tempore possint
Semina confluere, et solis reparare nitorem.
Multa videmus enim, certo quæ tempore fiunt
Omnibus in rebus; florescunt tempore certo
Arbusta, et certo dimittunt tempore florem:
Nec minus in certo denteis cadere inperat ætas
Tempore, et inpubem molli pubescere veste,
Et pariter mollem malis demittere barbam.
Fulmina postremo, nix, imbres, nubila, ventei,
Non nimis incertis fiunt in partibus anni.
Namque, ubi sic fuerunt caussarum exordia prima,
Atque ita res mundi cecidere ab origine primâ,
Consequiæ quodque est jam rerum ex ordine certo.
Crescere itemque dies licet, et tabescere nocteis,

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phænomenon he is describing, the truth of which does not depend upon himself alone, but is confirmed by the conjoint testimony of Diodorus Siculus, and Pomponius Mela. It is thus the former describes it in lib. xvii. 7. Ιδιον δε τι τε παραδοξον συμβαινει γινεσθαι περι τουτο το ορος, κατα την του κυνος επιτολην, επ' ακρας της κορυφης, δια την νηνεμιαν του περιεχοντος αερος· ὑπιρπιτη γαρ γινεσθαι την ακραν της των ανεμων πνοης, ἑρασθαι δε τον ἡλιον, ετι της νυκτος ουσης, ανατιλλοντα· τας ακτινας ουκ εν κυκλοτερει σχηματι τετραμμενον (Wakefield proposes τεθραμμενον) αλλα την φλογα κατα πολλους τοπους ἑχοντα διεσπαρμενην, ὡστε δοκειν πυρα πλειω θηγγανειν του τοις γης ὁριζοντος· μετ' ολιγον δε συναγεται ταυτα προς ἑν μεγεθος, ἑως αν γενηται τριπλεθρον διαστημα· και τοτε, ηδε της ἡμερας επιλαβουσης, το φαινομενον του ἡλιου μεγεθος πληρωθεν την της ἡμερας δια θεσιν κατασκευαζει. "An extraordinary phænomenon occurs on this mountain: for, as the dog-star begins to rise, the utmost degree of calmness is perpetually diffused through the atmosphere over its entire summit, which is unshaken by the least breath of air: and while it is yet night the sun is seen to ascend, not globose and circular, but in a flame so diffused that a variety of fires seem to assemble in the horizon. Presently afterwards, they become all concentrated into one substance of about three

Seem they, the flames diffus'd conglobing firm
Till springs, at length, the radiant orb complete.
Nor strange conceive it that the seeds of fire
Should thus assemble, and, at hour precise,
Renew the solar splendour: facts like these
All nature wide displays; at hour precise
Blossoms the shrub, at hour precise its bloom
Loses deciduous; fixt, determin'd time
Throws from the boy his infant teeth, arrays
In downy puberty, and, o'er his cheeks,
Flings the first feathers of th' unripen'd beard.
Clouds, thunders, tempests, rains, and gelid snows,
At punctual seasons all alike recur.
For as the train of causes first uprose,
And the young world its earliest features found,
Things follow things in order most exact.
And day elongates, and the night contracts,

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hundred feet diameter, till, at length, with the rising day, the sun, hence compacted, assumes his usual magnitude, and shines with his usual light." The description of Pomponius Mela is precisely to the same effect, but something more minute still; and he anticipates it with the remark, that this phænomenon is peculiar to Mount Ida, and has never been noticed in any other part of the world whatever. De Situ Orbis, v. 6. Pomponius, however, is in this respect a little mistaken, though the appearance is by no means common. It is a *mirage*, or atmospheric allusion, the cause of which I have already attempted to explain in the Note on Book IV. ver. 144. to which the reader may return at his leisure.

Ver. 695. *For as the train of causes first uprose, And the young world*——] Thus, Epicurus, as adduced by Bentley from Diog. Laert. x. 92. κατα την εξ αρχης ο την γενεσιν του κοσμου αναγκην: "according to the necessary train of causes from the beginning, in the first creation of the world." Thus, also, Virgil with exquisite elegance:

Non alios *primâ* crescentis *origine mundi*
Illuxisse dies, aliumve habuisse tenorem
Crediderim. Georg. ii. 336

Et minui luces, quom sumant augmina noctes;
Aut, quia sol idem, sub terras atque superne,
Inparibus currens amfractibus, ætheris oras
Partit, et in parteis non æquas dividit orbem;
Et, quod ab alterutrâ detraxit parte, reponit
Ejus in advorsâ tanto plus parte, relatus;
Donec ad id signum cœli pervenit, ubi anni
Nodus nocturnas exæquat lucibus umbras:
(Nam medio cursu flatûs Aquilonis, et Austri,
Distinet æquato cœlum discrimine metas,
Propter signiferi posituram totius orbis,
Annua sol in quo contundit tempora serpens,
Obliquo terras, et cœlum, lumine lustrans;

Ver. 698. *And day elongates, and the night contracts,*] For the variable length of the days and nights in the different seasons, our poet offers three hypotheses. The first is the obliquity of the ecliptic, or path described by the sun in his annual voyage round the world, as taught, indeed, at the present moment, in all our books on geography: for, though in the science of astronomy, the Copernican system is universally adopted, it is curious enough to observe that, in the former science, the old theory of Ptolemy is yet, ostensibly at least, adhered to, and the sun is still represented as travelling round the immoveable earth; an absurdity which is infinitely perplexing to children, and which cannot too soon be relinquished. While this mode of education, however, prevails, our poet will easily be understood, and his accurate and elegant delineation be duly appreciated without a comment, even by beginners. The other two hypotheses he enumerates as taught in his own day, are far more wild and unphilosophic. The one supposes the atmosphere to be much denser in some places than in others, in particular seasons of the year; and in consequence hereof, that the sun is, at such times, considerably retarded in his diurnal revolution, and rises in the east at a later hour in the morning: and the other, maintained by Xenophanes, Heraclitus, and all those who conceived that the sun was a conglobation of fiery atoms dissipated every night, and renewed every morning, that these fiery atoms, in consequence of such different density of the atmosphere, at particular seasons of the year, move forwards more slowly or swiftly, and assemble and concentrate themselves at an earlier or later hour, in proportion to the aerial resistance they meet with.

And night augments, and day curtails its course,
Since the same sun, earth under and above
Revolving, ether with unequal curve
Cleaves, and to parts of magnitude unlike
Severs the globe; alternate this o'er that
Prevailing gradual till the nodes he reach
Where night and day assimilate their reigns.
For, in the central realms 'twixt north and south,
His utmost wanderings, midway, heaven divides:
So transverse winds the star-enamell'd path
Through which his mazy steps the seasons lead,
With ray oblique illuming earth and sky.
For thus they hold the heavenly orb who mark
Throughout arrang'd with constellations fair.

Ver. 710. *With ray oblique illuming earth and sky.*] Thus Virgil, in verses worthy of our own poet:

——via secta per ambas,
Obliquus qua se signorum verteret ordo.
GEORG. i. 238.

Twixt the two zones a path oblique inclines,
Where, in refulgent order, roll the signs.
WARTON.

Ver. 712. *Throughout arrang'd with constellations fair.*] The great body of fixt stars surveyed in the firmament, have been immemorially divided into distinct clusters or constellations, for their easier discrimination. These clusters amount in the whole to between forty and fifty, and take their names from an imagined resemblance to different animals, or other figures we are acquainted with on earth. The zodiac consists of twelve of these signs, or clusters of stars: or, in other words, the sun passes through twelve of them in his annual path round the earth; and it takes him up about a month to complete the space in the heavens occupied by each: and he is said to be in one of those signs, when he appears in that part of the celestial sphere in which such separate cluster of stars is situate. According to Aratus, Astræus was the inventor of this artificial and useful division of the heavens: whence Germanicus, in his Latin version of this poet:

——fama parentem
Tradidit astrorum.

Him, Fame th' inventor of the zodiac stamp'd.

But the invention not only of asterisms, or configurations of fixt stars, but also of a regular zodiac, is now well known to have been of a much earlier period, and was probably introduced into Greece and India from one common quarter. What constituted this quarter is doubtful: Sir Isaac Newton regarded Egypt as the parental point; M. Montucla,

Ut ratio declarat eorum, qui loca cœli
Omnia, dispositis signis ornata, notarunt)
Aut, quia crassior est certis in partibus aër, 695

Arabia; and Sir W. Jones, with more probability, as it appears to me, than either of the others, Chaldea. "I have perfectly satisfied myself," says the last excellent scholar, "that the practice of observing the stars began with the rudiments of civil society, in the country of those whom we call Chaldeans, from which it was propagated into Egypt, India, Greece, Italy, and Scandinavia, before the reign of Sisac or Sacya; who, by conquest, spread a new system of religion and philosophy from the Nile to the Ganges, about a thousand years before Christ." Vol. i. 348.

Nothing can be more obvious than that the zodiacal circle proceeded from one common point, since not only the same circle is made use of, and with very little diversity, by all these various, remote, and unconnected nations, but since the same names and figures are, for the most part, applied to the same constellations by all of them; a fact which no combination of chances, or any moral cause whatever, independently of that now assigned, could have produced. And that this important circle must have been contrived and arranged in a very high period of antiquity is indisputable, from the zodiacs lately discovered in the two temples at Tentyra and Esne in Egypt; and, more especially, from express references to the zodiacal asterisms in the works of the Indian poets, Amarsinh and Calidas, who are known, from the most positive historic testimony to have preceded the birth of our Saviour by nearly, if not more than a century, and were perhaps contemporary with our own poet.

The introduction of the *Hands* into the sign Leo, in the zodiac at Tentyra, has of late been brought forwards, with most heart-felt triumph, by various infidel philosophers, to prove that this zodiac must have been invented at least *fifteen thousand two hundred* years anterior to the Christian æra, and, consequently, that the Mosaic chronology is false, and its history all a forgery. Now it is only necessary to silence this vain-glorious calculation to observe, that the hands in Leo did not, among the Egyptians, constitute a symbol of the summer solstice, but was an apt and beautiful emblem of the *conjunction* of the heliacal rising of Sirius, or the dog-star, which coincided with the entrance of the sun into the sign Leo, and the inundation of the Nile. The proof of this conjunction, and application of the symbol of the hands, is collected from an express passage in Horapollo, and is confirmed by various Egyptian monuments in which the sign Leo makes its appearance. We are acquainted, moreover, with the Egyptian cycle of the dog-star of 1461 years, and know that its invention took place something less than 135 years before Christ. Independently of which, it should not escape our attention, that the ornaments of the temple at Tentyra are mostly Grecian, and that it is decorated with Greek inscriptions: whence we may fairly collect, that the temple itself must have been erected after the Macedonian conquest, and the subsequent union of the Grecian and Egyptian orders of architecture. After these observations, the antiquity of the temple at Esne is not worth minutely inquiring into, since it is allowed on all sides to be of considerably later date than that at Tentyra, and is probably not more than coëval with the reign of Augustus. The abate Domenico Testa, in his very learned and valuable defence of revelation against this impudent attack of the present day, has, nevertheless, fallen into an error in asserting that the constellation of the Balance, which appears in the two Egyptian zodiacs, was only discovered by the astronomers of the school of Alexandria: for the Balance forms a sign in the oldest zodiacs of India, and can be traced to have existed as such for a century, or nearly so, anterior to the foundations of this celebrated city.

The Bramins have, indeed, the first pretensions to a circle of this description of any existing class of people: they have also a lunar as well as a solar zodiac; the former consisting of twenty-seven stations or *nacshatras*, as the latter does of twelve asterisms;

Or, earth beneath, the atmosphere, perchance,
Hangs, in fixt places, heavier; whence the seeds
Of congregating fires, with toil immense, 715

and, as nearly as may be, every alternate nacshatra deriving its name from the proper appellations of the lunar months. It is hence obvious, that two lunar stations, mansions, or nacshatras, are co-extensive with one solar zodiacal sign, or that nine stations correspond with four signs, such being the relative proportion between twelve and twenty-seven. The following table, which I trust will be neither unamusing nor uninstructive, and which I have drawn up, with some additions, from Sir Wm. Jones, presents the reader with a comparative view of both the solar and lunar zodiacs of India, as to their correspondent divisions, the names and interpretation of their different signs or stations, the stars presented by the latter as situated in our own zodiac, and the degrees to which they extend, commencing with the first star in the asterism of Aries, which we now perceive near the beginning of the sign Taurus, as it was placed in the ancient sphere. The signs marked in *Italics*, in the lunar zodiac, give the names of the respective months.

Solar Zodiac.		Lunar Zodiac.			
Names.	*Interpretations.*	*Names.*	*Interpretations.*	*Stars in Reference to the Solar Figures.*	*Degrees.*
Mésha	The Ram	*As'winè*	The Horse's head	*Three* in and near the head	13° 20′
		Bharanì	The Bull's head	*Three* in the tail	26° 40′
Vrĭsha	The Bull	*Crĭticà*	The Razor	*Six* of the Pleiads	40° 0′
		Róhinì	The Waggon	*Five* in the head and neck	53° 20′
Mit'huna	The Pair	*Mrĭgasiras*	The Antelope's head	*Three* in or near the feet, perhaps in the galaxy	66° 40′
		Ardrà	The Gem	*One* on the knee	80° 0′
		Punarvasu	The House	*Four* in the head, breast, and shoulder	93° 20′
Carat'i	The Crab	*Pushya*	The Arrow	*Three* in the body and claws	106° 40′
Sinha	The Lion	Aslésha	The Wheel	*Five* in the face and mane	120° 0′
		Maghà	The second House	*Five* in the leg and haunch	133° 20′
		Púrva p'halgunì	The Bedstead	*Two:* one in the tail	146° 40′
Canyà	The Virgin	Uttera *p'halgunì*	The second Bedstead	*Two* on the arm and zone	160° 0′
		Hasta	The Hand	*Five* near the hand	173° 20′
		Chitra	The Pearl	*One* in the spike	186° 40′
Tulà	The Balance	Swátì	The Coral	*One* in the N. scale	200° 0′
		Visác'ha	The Festoon	*Four* beyond it	213° 20′
Vrĭshchica	The Scorpion	Anurádhà	The divine Oblation	*Four* in the body	226° 40′
		Jyéshi''ha	The Ear ring	*Three* in the tail	240° 0′
Dhanus	The Bow	Múla	The Lion's tail	*Eleven* towards the point of the arrow	253° 20′
		Púwáshád'ha'	The Couch	*Two* in the leg	266° 40′
Macara	The Sea Monster	Utteráshadhà	The Elephant's Tooth	*Two* in the horn	280° 0′
		Sravanà	The three foot steps of Vishnu	*Three* in the tail	293° 20′
Cumbha	The Ewer	Dhanisht'a	The Tabor	*Four* in the arm	306° 40′
		Satabhishà	The Jewel	*Many* in the stream	320° 0′
Mína 12	The Fish	Purva *bhadrapadà*	The two-faced Image	*Two* in the first fish	333° 20′
		Utterabhádrapadá	The second Couch	*Two* in the cord	346° 40′
		Revatì 27.	The smaller Tabor	*Thirty-two* in the second fish and cord	360° 0′

Sub terris ideo tremulum jubar hæsitat igni,
Nec penetrare potest facile, atque emergere ad ortus;
Propterea, noctes hiberno tempore longæ
Cessant, dum veniat radiatum insigne diei:
Aut etiam, quia sic alternis partibus anni
Tardius, et citius, consuerunt confluere ignes;
Quei faciunt solem certâ desurgere parte.
Luna potest, solis radiis percussa, nitere;
Inque dies majus lumen convortere nobis
Ad speciem, quantum solis secedit ab orbe,
Donec eum contra pleno bene lumine fulsit,
Atque oriens obitus ejus super edita vidit:
Inde minutatim retro quasi condere lumen
Debet item, quanto propius jam solis ad ignem
Labitur ex aliâ signorum parte per orbem:
Ut faciunt, lunam quei fingunt esse pilaï
Consimilem, cursûsque viam sub sole tenere:
Propterea fit, utei videantur dicere verum.

Ver. 714. ——*whence the seeds*
Of congregating fires, with toil immense,] The opinion of Xenophanes, &c. See Note on ver. 698. of this Book.

Ver. 716. ——*weave the trembling dawn:*] Thus Oppian, in verses of exquisite beauty:

——θοαις ακατοισι φεροντες
Λαμτομενας ἀιδας· οι δε τρεουσιν ιδοντες
Ελλοπες, ουδε μενουσιν ἑλισσομενην αμαρυγην.
Cyneg. iv. 143.

Ver. 722. *The moon may shine by solar lustres struck,*] This opinion is referred to by Epicurus in Diogenes Laertius, x. 24. Κινησεις τεσελενης και παλιν πληρωσις, &c. and is that of general admission in the present day. The creed, that she is an inhabited world, is also of as high antiquity as the opinion that she is an opake, irregular body, borrowing her light from the sun. It was asserted by Pythagoras, as we learn from Plutarch de Placit. Philos. ii. 30. and by Xenophanes, as we are informed by Cicero, Acad. Quæst iv. They believed her, like the earth, to be accommodated with mountains, valleys, woods, cities, rivers, and seas: to which Pythagoras fancifully added

Wade through, and later weave the trembling dawn:
And whence, through winter, long the tedious night
Drawls, ere the day-star rears his radiant front.
Or, haply, the young fires that frame the sun
More swift or tardy tow'rds the purple east
Alternate rush, as round the seasons roll.

The moon may shine by solar lustres struck,
Her argent front augmenting every day
As from the sun she wanders, till, at length,
Now full oppos'd, her total disc is light,
And, rising east, she marks his westward fall:
Then step by step retracting, earth beneath,
Her full-blown lamp, as tow'rds the sun she curves,
Through all the remnant of the radiant signs;
As deems the sage who holds her form globose,
And that below the solar orb her path
Punctual she winds; and sound the doctrine seems.

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that her offspring must be at least fifteen times as large as those of the earth. In modern times, she is still generally admitted to be peopled, though fancy has not yet ventured to measure the height, or ascertain the features of her inhabitants. It is certain, however, if there be inhabitants of any kind, they must be either very differently formed, or very differently accommodated from the race of man: since the moon has neither seas nor atmosphere, and is of course destitute of the advantage of clouds, rains and dews; for, without some such expanse, there can be nothing to support such vapours in the regions above her compact and solid body. What were formerly conceived to be immense lakes and oceans in her disc, upon a more accurate examination, are now detected to be vast and profound caverns, and places which reflect the sun's light much less strongly than other parts of her surface. Most of these spots also have little knolls or hillocks rising within them, and casting secondary shadows, which cause them to appear darker than other spots, that have fewer or less remarkable caverns. The effect produced by lunar seas with respect to light and shade, would be precisely the reverse; for instead of the dark protuberant irregularities exhibited by these excavations, all would, in such case, be uniformly smooth and level.

Est etiam quâ re proprio cum lumine possit
Volvier, et varias splendoris reddere formas.
Corpus enim licet esse aliud, quod fertur, et unâ
Labitur, omnimodis obcursans obficiensque;
Nec potis est cerni, quia cassum lumine fertur.
Vorsarique potest, globus ut, si forte, pilaï,
Dimidiâ ex parte candenti lumine tinctus;
Vorsandoque globum varianteis edere formas.
Denique, eam partem, quæquomque est ignibus aucta,
Ad speciem vortit nobis, oculosque patenteis:
Inde minutatim retro contorquet, et aufert,
Luciferam partem glomeraminis atque pilaï;
Ut Babylonica Chaldæûm doctrina, refutans
Astrologorum artem, contra convincere tendit:

Ver. 734. ——*if, in front,*
Some other orb attend her,——] Anaximander is generally conceived to have entertained this opinion. None of his writings, however, at present, remain, that can fully authorize such a creed: although detached passages of him, still preserved in the works both of Plutarch and Diogenes Laertius, incontrovertibly prove that he regarded the moon as a body luminous in herself. In the case of the planet Saturn, we meet with a circular appendage, which seems endowed with a power of collecting the rays of solar light in a much ampler degree than the body of the planet himself, and of diffusing them over his surface: in the theory before us, a kind of converse substance is supposed, an exterior orb or satellite attendant upon her, capable of absorbing, instead of concentrating and reflecting the solar lustre, and of course of remaining perpetually opake and invisible. By a periodical routine of evolutions, produced by such satellite, in the front of the lunar orb, during her passage round the earth, the different phases she exhibits are supposed to be created upon this theory.

Ver. 738. *Or she may still, if spherical of form,*
Each change disclose, though luminous but half:] It is a fact, incontrovertibly ascertained from observation of the lunar maculæ, that, with respect to ourselves, not more than one half the orb of the moon is ever illumined. Whence we may fairly deduce these two corollaries, first, that the moon revolves around her own axis; and, secondly, that such revolution is precisely commensurate with her revolution round the earth; and consequently requires a period of 29 days 12 hours 44 min. for its completion; or, in other words, that she has but one day and night in every month. If this were not the case, some part, at least, of her opposite hemisphere, would occasionally be presented to the inhabitants of the earth, which it is not at any time: and therefore, to the present moment, we are totally ignorant of the superficial linea-

Yet may the moon with lustre all her own
Shine, every phase unfolding, if, in front,
Some other orb attend her, through her course
Gliding complete, in every mode convolv'd,
While viewless still to sight since rear'd opake.
Or she may still, if spherical of form,
Each change disclose, though luminous but half:
For, as she self-revolves, her gradual lamp
Must grow till all her bright side beams complete;
Then, rolling still, as gradual must she close
Her lucid eye, till all oppos'd is shade;
As teach Chaldean magi, striving strong
The schools of Greece t' o'erpow'r, as though the creeds

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ments of this half of her orb. The opinion here advanced, that the moon may probably be naturally luminous in the hemisphere opposed to the earth, and naturally opake in her antagonist side, was strenuously maintained by Berosus, a celebrated Chaldaic astrologer in the æra of Antiochus Soter, and was also the universal dogma of the Babylonian magi, in opposition to the general philosophy of Greece, which asserted that the moon was uniformly opake of herself in both hemispheres, and that the light she exhibited was borrowed entirely from the sun. The Babylonians, as is well observed by Faber in a citation from Plutarch, accounted for the eclipse of the moon by supposing that at such time she turned the unenlightened side of her orb towards the earth, whence such a phænomenon would necessarily ensue.

The passage in our poet here referred to, has, however, been in some measure differently understood by some interpreters, who have idly apprehended that he meaned to represent the Chaldaic and Babylonian astronomers as two distinct sects, and that the former united with the Greeks in opposition to the latter. Marchetti has, unaccountably, adopted this idea:

——in quella stessa
Guisa, che i Babilonici dottori,
I Caldei confutando, in contro all' arte
Degli astrologi lor tentar provare.

And thus also Creech:

And this the later Babylonian sect
Asserts, and the Chaldean schemes reject.

It will be sufficient to insert the text, to confute this interpretation, ver. 726.

Ut Babylonica Chaldæûm doctrina, refutans
Astrologorum artem, contra convincere tendit.

Proinde, quasi id fieri nequeat, quod pugnat uterque ;
Aut minus hocc' illo sit quur amplectier ausis.
Denique, quur nequeat semper nova luna creari
Ordine formarum certo, certisque figuris,
Inque dies privos aborisci quæque creata,
Atque aliâ illius reparari in parte, locoque ;
Difficile est ratione docere, et vincere verbis :
Ordine quom videas tam certo multa creari.
It Ver, et Venus ; et, Veris prænuncius, ante
Pennatus graditur Zephyrus, vestigia propter
Flora quibus mater præspargens ante viaï
Cuncta coloribus egregiis, et odoribus, obplet :
Inde loci sequitur Calor aridus, et comes unâ
Polverulenta Ceres, et Etesia flabra Aquilonum.
Inde Auctumnus adit, graditur simul Euius Euan :

Ver. 748. *Why too may not each rising moon be new ?*] Upon this opinion I have already commented in the Notes on ver. 665, and 698, of the present Book, to which I refer the reader.

Ver. 757. *O'er every footstep blooms of choicest hue,*] Lucretius, ver. 738.

——ante viaï
Cuncta coloribus egregiis, et odoribus, obplet.

Marchetti :

——tutta cosperge
La strada innanzi di color novelli,
Bianchi, gialli, vermigli, azzusi, e misti,

This is by no means amiss, but not a letter of the latter line is to be found in the text.

With this exquisite description of the Spring, there is none, that I know of, more worthy of comparison than the following, which occurs amidst many others of equal beauty in the Book entitled Ajaibo'lmakdur :

و كان اذ ذاك قد خرج فصل الشتاء و فصل الربيع قد تزين واتي و صفحات الرياض باناصل صباغ القدة تلونت وعروس الروض قد اخذت من صواغ لحكمة زخرفها وازينت والا طيار في الازهار صا ببن صاية بلبل والف هزار قد تشققت الاسماع واقاصت السماع واستمالت الطباع برخيم صوتها واحيت اثار رحمت الله الارض بعد صوتها

Wag'd endless war, or this than that adduc'd
Proofs more conclusive to th' unbiass'd mind.
Why too may not each rising moon be new?
Its time, form, place, by nicest order sway'd,
And, springing daily, daily too decay,
Still reproduc'd for ever? this to solve
Both words and reasoning arduous find alike,
Since things throughout in order flow precise.
Spring comes, and Venus, and, with foot advanc'd,
The light-wing'd Zephyr, harbinger belov'd,
Maternal Flora strewing, ere she treads,
O'er every footstep blooms of choicest hue,
And the glad Ether loading with perfumes.
Then Heat succeeds, the parch'd Etesian breeze,
And dust-discolour'd Ceres; Autumn, then,

"Now had the boisterous Winter departed, and the Spring, in all her graces, had revisited the earth. The face of the meadows was painted with colours by the fingers of the Deity, as though the dyer had sprinkled them with his hues; and the fair bride of the garden was decorated by heavenly Wisdom, and beautifully attired, as by a jeweller. The birds chirupped among the bowers: a hundred nightingales, a thousand linnets assaulted the ear, arrested the attention, and tranquillized all nature with the sweetness of their carols: while the footsteps of divine benevolence recalled the earth into life from its grave of dissolution."

Ver. 759. ——*the parch'd* Etesian *breeze*,] The Etesian wind was a monsoon blowing regularly from the north-east on the return of summer, and about the rise of the dog-star, for about eleven or twelve days. It is to this monsoon Lucretius, in Book VI. v. 737. attributes the overflowing of the Nile: to the Note on which verse I refer the reader for a fuller account. It derives its name from the Greek term ἔτος, a year, in consequence of its *annual* return. For the cause of monsoons, or periodical winds in general, see Note on ver. 661. of the Book before us.

Ver. 760. *And dust-discolour'd* Ceres;——] Lucretius, ver. 741.

Polverulenta Ceres,——

Whence Virgil:

——glebasque jacentes
Pulverulenta coquat maturis solibus *Æstas*.
Geo. i. 60.

Inde aliæ Tempestates, Venteique, sequuntur;
Altitonans Volturnus, et Auster fulmine pollens.
Tandem Bruma niveis adfert, pigrumque rigorem
Reddit; Hyems sequitur, crepitans ac dentibus Algu.
Quo minus est mirum, si certo tempore luna
Gignitur, et certo deletur tempore rursus;
Quom fieri possint tam certo tempore multa.

Solis item quoque defectus, lunæque latebras,
Pluribus e caussis fieri tibi posse putandum est.
Nam, quur luna queat terram secludere, poscis,
Lumine, et a terris altum caput obstruere ei,
Objiciens cæcum radiis ardentibus orbem?
Tempore eodem aliud facere id non posse putetur

And dust-discolour'd Summer, with ripe suns
Concocts th' inactive greensward.

Ver. 764. Cold *shuts the scene, and* Winter's *train prevails,*
Snows, *hoary* Sleet, *and* Frost *with chattering teeth.*] The whole of this exquisite delineation of the progress of the seasons is, I believe, inimitable. Almost every idea is personified, and every syllable alive: the order is most exact, and the characters true to themselves. There are few descriptions, either in ancient or modern poetry, that can dare a comparison with it. I will select, however, the following, of Thomson. He is addressing the sun:

——round thy beaming car,
High-seen, the Seasons lead in sprightly dance
Harmonious knit, the rosy-finger'd hours:
The Zephyrs floating loose; the timely Rains;
Of bloom ethereal the light-footed Dews;
And softened into joy the surly Storms.
Summer ii. 120.

This is elegant, but the painting wants a force and relief which the picture of Lucretius possesses in a high degree. It is too general to be discriminate; and not a single Season is delineated characteristically.

Ver. 769. *Thus, too, to various causes may'st thou charge*
The sun's eclipse, or shade of lunar light.] The same diversity of causes was equally admitted by Epicurus, or rather he was equally undetermined which of them to select as an operating principle, as we learn from Diogenes Laertius, x. 96. λεγει, says he, of this philosopher, και τον ηλιον εκλειπειν, σεληνην

Follows, and tipsy Bacchus arm in arm,
And Storms and Tempests; Eurus roars amain;
And the red South brews thunders: till, at length,
Cold shuts the scene, and Winter's train prevails,
Snows, hoary Sleet, and Frost with chattering teeth.
Whence scarce stupendous seems it that the moon
Should punctual rise, and, rising, punctual die,
Since things at large, so punctual, things succeed.
Thus, too, to various causes may'st thou charge
The sun's eclipse, or shade of lunar light.
For why should rather, 'twixt the sun and earth,
The moon rush rampant, and with shadowy orb,
Shut from mankind the radiant fount of day
Than aught besides that haply may subsist

επισκοτουσης· σεληνην δε, του της γης σκιασματος. In this dubiety of mind, Lucretius enumerates two different theories by which eclipses of the sun and moon were resolved in his own era. The first, which was the more common, and is admitted in the present day, supposed the interposition of the moon, or some other body, equally opake, between the sun and the earth in the phænomenon of a solar eclipse; and of the earth, or some other opake substance between the sun and moon in that of a lunar eclipse. Modern astronomy admits of no other interposition, however, in both these instances, than the moon and earth respectively, at least in our ordinary eclipses. Though the occasional transit of both Mercury and Venus over the sun's disc, that produces a partial eclipse of the latter, will in some measure justify our poet in the conception of some other opake bodies, besides those of the moon and earth, by which such a phænomenon may be engendered.

The second conjecture he enumerates was first introduced by Xenophanes; and is in perfect consonance with his theory of the production of a new set of celestial luminaries once in every twenty-four hours, from the periodical assemblage and conglobation of the particles of fire for this purpose, as specified in the Note on ver. 665 of this Book; and their regular obstruction and delay at particular seasons of the year from an increased density of the atmosphere in definite places. Pressing this system a little farther, Xenophanes accounted for the eclipse of the sun and moon, by asserting that, occasionally, the obstruction these luminaries met with in their voyage round the earth was so violent and irresistible as to suppress their light altogether through a considerable portion of their journey: and that they only again became enlightened when they had at length escaped from this doleful encounter, and had passed through such inimical regions.

Corpus, quod cassum labatur lumine semper.
Solque suos etiam dimittere languidus igneis
Tempore quur certo nequeat, recreareque lumen,
Quom loca præteriit, flammis infesta, per auras;
Quæ faciunt igneis interstingui, atque pariri?
Et, quur terra queat lunam spoliare vicissim
Lumine, et obpressum solem, super ipsa, tenere,
Menstrua dum rigidas coni perlabitur umbras;
Tempore eodem aliud nequeat subcurrere lunæ
Corpus, vel supra solis perlabier orbem,
Quod radios interrumpat, lumenque profusum?
Et tamen, ipsa suo si fulget luna nitore,
Quur nequeat certâ mundi languescere parte,
Dum loca, luminibus propriis inimica, per exit?
Quod super est, quoniam magni per cærula mundi
Quâ fieri quidquid posset ratione, resolvi;
Solis utei varios cursus, lunæque meatus,

Ver. 779. *That thus obstructs her glory and renews?*] I read with Mr. Wakefield, to whom we are indebted for the renovation of what I believe to have been the original lection, ver. 760.

Quæ faciunt igneis interstingui, atque pariri.

In all the common editions, which have been hitherto followed by the versions of every language, and which curtail us of a beautiful contrast, we meet with it thus:

Quæ faciunt igneis interstingui atque *perire*.

Ver. 780. *And why, moreo'er, should earth alone arrest*
Light from the labouring moon,——] This and the preceding phænomenon are thus described and accounted for by Polignac. He is speaking of the nodes:

——fieri quoque semper in illis
Defectus varios lunæ solisque necesse est.
Nam cum luna, vagans terreni transmeat orbis
Planitiem, si tum directo tramite solem
Dividet a terrâ, terram obscurabit; et ipsa
Protinus amittit lumen, si dividet illam
Solis ab aspectu directo tramite tellus.
Altera in alterius tunc certo decidet umbram.
Propterea solem non omni mense videmus
Deficere, aut lunam spoliari lumine solis:

Rolling sublime, but ever void of light?
Why may not, too, in time and place prescrib'd,
The sun himself grow languid, his bright beam
Powerless to pour, till now the spot he pass
That thus obstructs his glory and renews?
And why, moreo'er, should earth alone arrest
Light from the labouring moon, and, riding high,
Blindfold the solar disc, the lunar sphere,
Still loftier, gliding through her shadowy cone,
While nought of body else, 'twixt moon and sun
Rushing, can quench the ray profusely dealt?
So, if the moon herself be lustrous, why
May ne'er that lustre languish till the bound
Joyous she pass that poisons all her lamp?
Thus having trac'd the causes obvious most
That sway the sapphire heavens; whence the bright sun,
The moon fulfil their courses, and the shade

Non contingit enim semper tria corpora recte
Opponi lunæ cum transitus ille recurrit.
Lib. viii. 1259.

Here, too, eclipses must at times occur
Of sun and moon; for when the lunar sphere
Cuts as she roves, earth's orbit in its plane,
If then, with path direct, the sun from earth
She sever, earth is darken'd; and herself
Loses all light as sudden when, with path
Direct, earth shuts her from the solar disc.
Alternate hence o'er each eclipse must fall.
Yet see we not, each month, the sun conceal'd,
Nor moon in darkness; for not always meet,
Mid the moon's transit, the three orbs oppos'd.

Ver. 786. ——*why*
May ne'er that lustre languish——] The different hypotheses, here adverted to by Lucretius, were formerly noticed, and with the same degree of hesitation by Epicurus. Thus, that which supposes the casual interposition of some other opake body besides the moon, to produce a solar eclipse, as remarked in ver. 774, occurs still in Diogenes Laertius, x. 96. Και ετι (εκλειψις ηλιου και σεληνης δυνασθαι γινεσθαι) κατ' επιτροχιτησιν αλλαττουσαν, ηγουν, η ευρακου, η τινος ετερου τοιουτου. And thus, the present opinion, which in Laertius immediately follows: Εκλειψις ηλιου και σεληνης δυνασθαι μεν γινεσθαι και κατα σβεσιν. See Note on ver. 769. of the Book before us.

Noscere possemus, quæ vis, et caussa, cieret:
Quove modo soleant obfecto lumine obire,
Et neque opinanteis tenebris obducere terras;
Quom quasi connivent, et aperto lumine rursum
Omnia convisunt clarâ loca candida luce:
Nunc redeo ad mundi novitatem, et mollia terræ
Arva; novo fetu quid primum in luminis oras
Tollere, et incertis credunt conmittere ventis.
Principio, genus herbarum, viridemque nitorem,
Terra dedit circum colleis; camposque per omneis
Florida fulserunt viridanti prata colore:
Arboribusque datum est variis exinde per auras
Crescundi magnum inmissis certamen habenis.
Ut pluma atque pilei primum, setæque, creantur

Ver. 799. *And first the race she rear'd of verdant herbs,*] The equally elegant and philosophic description of the first creation of the vegetable and animal kingdoms, upon which the poet now enters, has been a theme of praise in every age and nation. "He describes the rise of things," says the commentator upon Creech's English version, with a just sense of his excellence, "in so lively a manner, that he seems even to have been present at their birth." He coincides most minutely with the arrangement of Moses; and neither of them have been essentially deviated from by any of the systems of modern philosophy. As the waters receded from the summits of the nascent mountains, the first phænomenon we may suppose to have been exhibited was that of "verdant herbs, glistening," as our poet picturesquely expresses it, "over every hill." Let us compare the representation with that of the Hebrew cosmologist, Gen. cap. i. 9. 10. "And God said, let the waters under the heaven be gathered together unto one place, and let the dry land appear; and it was so. And God called the dry land earth, and the gathering together of the waters called he seas: and God saw that it was good." Then immediately follows, ver. 11. "And God said, let the earth bring forth grass, the herb yielding seed, and the fruit-tree yielding fruit after his kind, whose seed is in itself upon the earth; and it was so."

Ver. 800. *Glistening o'er every hill;*——] Thus Pindar, with a still bolder pencil, Olymp. ii.

——αν-
Θεμα και χρυσου φλεγει

Like gold the *flowrets glisten.*

Nor less beautifully Beattie, in his Minstrel:

Where flowers *in living lustre blow.* i. 27.

The entire description of Milton, who, in consonance with the Mosaic arrangement, first of all supposes the creation of the different classes of vegeta-

How rear'd that oft their radiant front enwraps,
Hiding abrupt, as though their eyes now wink'd,
And now re-open'd, o'er the face of things
Shedding afresh clear floods of lucid white;
Once more return we to the world's pure prime,
Her fields yet liquid, and the tribes survey
First she put forth, and trusted to the winds.

And first the race she rear'd of verdant herbs,
Glistening o'er every hill; the fields at large
Shone with the verdant tincture and the trees
Felt the deep impulse, and with outstretch'd arms
Broke from their bonds rejoicing. As the down
Shoots from the winged nations, or from beasts

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bles, is highly beautiful, and may be agreeably compared with the present of our own poet:

——the bare earth, till then
Desert and bare, unsightly, unadorned,
Brought forth the tender grass, whose verdure clad
Her universal face with pleasant green.
Then herbs of every leaf, that sudden flowered
Opening their various colours, and made gay
Her bosom smelling sweet; and these scarce blown,
Forth flourished thick the clustering vine, forth crept
The smelling gourd, up stood the corny reed
Imbattled in her field, and th' humble shrub,
And bush with frizzled hair implicit.
PAR. LOST, vii. 313.

Ver. 802. ——*and with out-stretch'd arms*
Broke from their bonds rejoicing.——] The corresponding verse in the original, 785.

Crescundi magnum inmissis certamen habenis,

is highly bold and figurative; but not too audacious to be copied by Virgil:

——et dum se lætus ad auras
Palmes agit, laxis per purum immissus habenis.
GEORG. ii. 363.

The shoots that dart, *rejoicing*, into air
Disdaining bonds.

Ver. 803. ——*As the down*
Shoots from the winged nations,——] Hence, most obviously, Ovid:

Prataque *pubescunt* variorum flore colorum.
TRIST. iii. 127.

The fields pubescent sprout with blooms diverse.

And here I cannot avoid reprobating the alteration of *lucescunt* for *pubescunt*, proposed by Mr. Wakefield

Quadrupedum membris, et corpore pennipotentum ;
Sic nova tum tellus herbas, virgultaque, primum
Substulit ; inde loci mortalia corda creavit
Multa, modis multis, variâ ratione, coorta.
Nam neque de cœlo cecidisse animalia possunt,
Nec terrestria de salsis exisse lacunis.
Linquitur, ut merito maternum nomen adepta
Terra sit, e terrâ quoniam sunt cuncta creata.
Multaque nunc etiam exsistunt animalia terris,
Imbribus et calido solis concreta vapore.
Quo minus est mirum, si tum sunt plura coorta,
Et majora ; novâ tellure, atque æthere, adulta.

Principio, genus alituum, variæque volucres,

---

in his citation of this verse on a different occasion. The common lection is doubtless the true one, and intrinsically elegant and spirited.

Nothing can be more accordant with the spirit and metaphor of our poet, than the description of the same appearance by Moses, in Gen. i. 11. in its *literal* version. In the Note above, on ver. 799, I have given this text, as rendered in our established lection ; but its verbal interpretation is as follows :

ויאר אלהים
תדשא הארץ דשא
עשב מזריע זרע
עץ פרי עשה פרי
לה ינו אשר זרעו בו על הארץ :
ויהי כן :

And God said,
Shoot forth, O Earth ! the shoots
Of the seed-sowing herbage,
Of the fruit-bearing fruit-tree ;
According to its kind, self-seeding upon the earth.
And it was so.

The same imperative form of address ought to run through the whole chapter ; and how superior does it render it, both in spirit and dignity, as well as in correctness of version, to the colloquial diction of the existing translations. I am surprized that it has never yet been attempted, excepting in the instance of " Be, Light !—and Light was." The holy Psalmist unquestionably understood it in the same manner, and hence, says he, Ps. xxxiii. 9.

He spake—and it existed,
He *commanded*, and it was accomplished.

Ver. 818. *Of these birds first, of wing and plume diverse,*] The air, consistently with every geological system, was the element first finished in the order of creation : and upon this account the cosmologists of Greece and Rome, as well as those of

Bristles or hair, so pour'd the new-born earth
Plants, fruits, and herbage. Then, in order next,
Rais'd she the sentient tribes, in various modes,
By various powers distinguish'd: for nor heaven
Down dropp'd them, nor from ocean's briny waves
Sprang they, terrestrial sole; whence, justly, EARTH
Claims the dear name of mother, since alone
Flow'd from herself whate'er the sight surveys.
E'en now oft rears she many a sentient tribe
By showers, and sun-shine usher'd into day.
Whence less stupendous tribes should then have ris'n
More, and of ampler make, herself new-form'd,
In flower of youth, and ETHER all mature.
Of these birds first, of wing and plume diverse,

Egypt, from whom the doctrine was, perhaps, originally derived, uniformly concur in the belief that birds were created anterior to all other animals. According to Anaximander, and several other philosophers, whose opinions are recited by Diodorus Siculus, lib. i. and who are also supposed to have acquired their knowledge from Egypt, these, in common with all others, except fishes, were hatched in little genial membranes or wombs, similar to the films which we trace, even at present, in stagnant fens and marshes, when, after a continuance of cold weather, the air suddenly becomes hot and sultry. But Lucretius does not deviate from their accustomed economy; he derives them from eggs, *varieque volucres, ova relinquebant:* and if I understand his system aright, he conceived that as soon as the summits of the loftiest mountains became desiccated by atmospheric exhalation, and the retreat of the chaotic ocean, these primitive eggs, formed, perhaps, by filmy cysts, or bubbles of exhaling vapour, impregnated by the etherial spirit that ascended, and duly heated by the extricated caloric that accompanied it, were deposited upon them; and in process of time were burst by the callow brood, for whom the genial earth had already provided a luxuriant harvest of vegetable nutrition. This formation of the parent stock of birds by eggs, rather than by any other medium, has been copied by our own immortal Milton:

> Mean while the tepid caves, and fens and shores
> Their brood as numerous hatch, *from th' egg that soon,*
> *Bursting with kindly rupture, forth disclosed*
> *Their callow young.*
>
> PAR. LOST, vii. 417.

The order of succession, as enumerated by Moses, is not essentially different. Upon the appearance of the dry land, the vegetable kingdom,

Ova relinquebant, exclusæ tempore verno: 800
Folliculos ut nunc tereteis æstate cicadæ
Linquunt sponte suâ, victum vitamque petentes.

as I have already observed, first began to sprout forth, which occupied the third day, or period of the scale by which he has admeasured the work of creation. During the fourth, so great was the perpetual efflux of ether and caloric, that the luminaries of heaven were completed, and commenced their career. And the fifth was devoted to the production of fishes and fowls.

It must be remarked that, in the strict letter of the Mosaic history, although both fishes and fowls are stated to have been created within the same period or division of time, the term fishes occurs first: and all our most celebrated modern geologists, from an intimate examination of the structure of the earth, so far as they have been able to penetrate into its interior, concur in maintaining that fishes must inevitably have had the precedence. Such is the doctrine of Buffon and Baillie, of Whitehurst and Kirwan: and such also, for any thing we know to the contrary, may have been the opinion of Lucretius; yet such, at the same time, is the poetic precipitancy with which he is hurried forwards in his description of this sublime and stupendous subject, or rather, perhaps, such the comparative ignorance of his own age, and of every succeeding, with respect to the different tribes of fishes, that he makes no mention of this order of animals whatsoever. Buffon and Whitehurst affirm that they must have existed first in the order of creation, and that for many ages; because they were competent to exist even before the summits of the loftiest mountains were exsiccated; and more especially because chalk-stone, or calcareous earth is not, according to their opinion, a primitive substance, but the mere exuviæ of testaceous fishes, however largely and loftily it may be discovered. Yet it has been amply ascertained of late that neither fishes, nor animals of any description, can generate calcareous earth by any organic power whatever: and that in every instance where it has issued from them, it has been a mere deposit or secretion, in consequence of their having lived upon food combined with calcareous molecules. This is particularly insisted upon by Mr. Kirwan, and indeed forms one of the most prominent differences of his theory from that of Mr. Whitehurst: the former contending, that calcareous earth is as truly primitive as silex, argil, or any of the other seven, that are generally admitted as such; and which he thus arranges, according to the quantities in which they are proportionably found; silicious, ferruginous, argillaceous, calcareous, magnesian, barytic, Scottish, and Japonic. But Mr. Kirwan himself, nevertheless, from the detection of the exuviæ of fishes upon the summit of mountains of almost every height and climate that do not exceed, and there are few that do exceed it, eight thousand five hundred feet above the level of the ocean, equally contends that fishes must have been created long anterior to every other animal tribe; and of fishes, the testaceous classes first, as being better able to subsist in muddy water. Above the height, however, of eight thousand five hundred feet from the level of the ocean, shells and other remains of fishes are never found; and he apprehends, therefore, that the chaotic fluid must have subsided to this depth before even the formation of fishes themselves. Yet upon this theory there is no reason why the tribes of birds might not have been created anterior to fishes; for the summits of several very extensive chains of mountains must, at this period, have been perfectly dry, and covered with vegetable food.

It is not, however, to be wondered at, that the ancients were not much acquainted with the history of fishes: for ichthyology has not become, even in our own day, a very favourite science; and there is no part of natural history that has been less profoundly explored. Artedi, who was, perhaps, more attached to it than any modern philosopher whatever, and bid fairest to advance it to some degree of perfection, died whilst he was arranging his system. His friend Linnéus appears at one time to have determined upon adopting the same system, but

Broke their light shells in spring-time; as in spring
Still breaks the grass-hopper his curious web,
And seeks, spontaneous, foods and vital air.

---

he soon abandoned the idea, and introduced a system of his own: a system, however, in many respects less commodious, and with which Linnéus himself never appears to have been satisfied. To Block and Lacépède we are chiefly indebted for generic classifications and descriptions of fishes, and to Dr. Munro and professor Camper, for the little knowledge we yet possess of their physiology and anatomy. It was this last naturalist who first detected the organ of hearing in this class of animals, who were, till this discovery, supposed to be both perfectly mute and perfectly dumb, neither of which, however, is altogether true. Camper first published an anatomical description of this organ in 1761;—he still pursued the inquiry; and in 1767, made it the subject of a memoir, addressed to the Royal Academy; to which learned body he addressed another memoir in 1774, containing a still more particular account of the organ of hearing in the Blowing-fish. It was at the same period that he first published his account of having detected the transmission of air into the cavities of the wings and bones of birds, as also into their cranium and mandibles. This discovery has been occasionally attributed to our own ingenious countryman Mr. J. Hunter, who was certainly engaged about the same time in the same pursuit: but the detection of this curious fact, in point of priority of time, is unquestionably due to M. Camper.

Ver. 819. *Broke their light shells in spring-time*;—] The parallel description of Virgil is so extremely opportune, and at the same time so intrinsically beautiful, that it would be unpardonable to omit it in the present place:

Non alios *prima crescentis origine mundi*
Illuxisse dies, aliumve habuisse tenorem
Crediderim: *ver* illud erat; *ver* magnus agebat
Orbis, et hybernis parcebant flatibus Euri;
Cum *primum* lucem *pecudes* hausere, virûmque
Ferrea progenies duris caput extulit arvis,
Immissæque feræ sylvis, et sidera cœlo.

Georg. ii. 336.

Yes! lovely Spring! when rose the world to birth,
Thy genial radiance dawn'd upon the earth.
Beneath thy balmy air creation grew,
And no black gale on infant nature blew.
When herds first drank the light, from earth's rude bed
When first man's iron race uprear'd its head,
When first to beasts the wild and wood were given,
And stars unnumber'd pav'd th' expanse of heaven.

Sotheby.

It is probably from one of these passages that Buchanan took the first hint for the following verses, which form part of a most exquisite ode to the Calends of May, inserted in his book of Miscellanies.

Cum *blanda veris temperies novo*
Illuxit orbi, primaque secula
Fulsere flaventi metallo,
Sponte sua sine lege justa;
Talis per omnes continuus tenor
Annos tepenti rura Favonio
Mulcebat, et nullis feraces
Seminibus recreabat agros.

When Spring, with *sweet attemper'd light*,
Cheer'd the new world, and, drest in gold,
The primal ages, glittering, roll'd,
Nor needed laws to act aright,
Such was the soft, the mild career
Of Zephyr through th' unchanging year
With such he sooth'd the rural plain,
And deck'd its unsown fields with grain

Tum tibi terra dedit primum mortalia secla;
Multus enim calor, atque humor, superabat in arvis.

Ver. 822. *Then rush'd the ranks of mortals;——*] By this common expression our poet includes obviously both man and beast:

Tum tibi terra dedit primum mortalia secla.
Ver. 803.

And the origin of both he supposes to have been alike; a dogma acceded to by almost every other school of Grecian philosophers as well as that of Epicurus. The economy of their creation is so minutely detailed by Lucretius, as to require no comment. Of the formation of fishes, as I have before observed, probably from our comparative ignorance of this order of animals, he makes no mention whatever. Birds he conceives to have arisen from primordial eggs: but as to every other class of sensitive beings, one comprehensive mode of production was, he informs us, common to the whole. Anaximander, however, made no distinction, in his theory, between birds and other animals: asserting that they were all equally produced from little uterine membranes, similar, in their first formation, to the films that are often found in stagnant fens and marshes upon a sudden recurrence of sultry weather. See Note on v. 818. of the present Book. The Stoics, as we learn from Lactantius, admitted nearly the same general theory; it was their belief, says he, in omnibus terris et agris, tanquam fungos, esse generatos: "that they were generated like fungi or mushrooms over every field and country." And consistently with our poet's account of the first nutrition of animals, Lactantius repeats from Archelaus, ii. 4. Ortos e terrâ, quæ limum similem lacti ad escam eliquaverit: "that they sprang from the earth, which oozed out, for their nutrition, a tenacious juice like milk." There were, undoubtedly, several other opinions entertained upon this recondite subject by the poets and philosophers, but this advanced by the Epicureans and Stoics, was the most esteemed, and by far the most beautiful: the generality of the rest, indeed, are too wild and incoherent to be worthy of a moment's notice.

This common theory of the two schools is moreover, particularly entitled to attention, from its analogy with the natural history of the present day. The Epicureans and Stoics, according to Lactantius, affirmed that mankind, as well as most other animals, were first generated, and drew their earliest subsistence from a nidus of "*fungi* scattered over every field and country." Dr. Darwin, in his observations upon this order of plants, but without the remotest reference to any such opinion, observes, in the seventh section of the last Book of his Phytologia, that "the fungi appear to be animals without locomotion, whose *lacteal* vessels are inserted into the earth, like those of vegetables, but whose gills or lungs are covered from the light, like those of animals, but exposed to the open air like the leaves or lungs of vegetables. Another curious occurrence, which seems to associate them with animals, if the truth can be depended upon, is, that some of them are of animal origin, as the common mushroom is said certainly to be procured from horse-dung." I am not writing to corroborate the fancies of this ingenious philosopher—but merely to shew, without, perhaps, his having been sensible of it himself—that this association of some species of fungi with animals, was admitted, even in a greater degree, by the schools of Epicurus and Zeno, who, like the present naturalist, regarded them not only as a species of "animals without locomotion, and with the possession of lacteal vessels," but as the nidus of almost all other animals, whom they nourished, first of all, by an uterine capsule, and afterwards by these very lacteal vessels themselves. It is in consequence of observations somewhat similar, that M. Buillon le Grange has denominated the common truffle, lycoperdon tuber, which ranks in the order of fungi, an *animalized vegetable*. See Annales de Chimie. vol. xlvi.

The only instance in which this theory appears to be inconsistent with the Mosaic account, according to its ordinary interpretation, is in the supposition

Then rush'd the ranks of mortals; for the soil
Exuberant then, with warmth and moisture teem'd.

that more than one man and one woman were created in the beginning, who became the common parents of all the human race: for there can be no doubt that Moses was himself firmly persuaded of the creation of a multiplicity of pairs of every other order of animals at the same time, and intended to convey such an idea in his history; although with a view of throwing a greater degree of harmony into the whole representation, this has been denied by Mr. Kirwan and some other modern philosophers, who have contended, but I think idly, that it does not appear, upon the Mosaic statement, that more than an individual pair of different classes of animals of any kind was generated at first; the rest like the human race being the progeny of one common stock.

If we look abroad into the world at large, there is such an amazing difference discoverable, both externally and internally, in the form, the colour, and the mental powers of the numerous varieties of man, that though it be by no means sufficient to convince myself of separate and distinct origins, yet I am not surprized that many modern philosophers should have adopted this belief of the ancients, and should endeavour to support it by various arguments drawn from natural history, with which it does not appear that the zoologists of Greece were ever acquainted. More especially, as by a little ingenuity, they seem, at first sight, to make even the Hebrew historian a partizan with themselves: for, from the time of Peyrerius, (Præ-Adamit. l. iii. 4.) it has been successively asserted, by the espousers of this doctrine, that Moses enumerates two distinct races, one of mankind in general, which occupied a part of the sixth day's creation, and is related in the first chapter of Genesis; and another of Adam and Eve alone, who were the immediate progenitors of the Hebrew race, and which is not recorded till the seventh verse of the second chapter: after which transaction, say they, he confines himself entirely to the history of his own nation, or of those which were occasionally connected with it. Neither is it easy, they adjoin, to conceive, upon any other explanation, how Cain could, in so early a period of the world, have been possessed of the mechanical implements of husbandry, or what is meant by the fear he expressed upon leaving his father's family after the murder of Abel, that every one who found him would slay him: or his going forth into another country, marrying a wife there, and building a city soon after the birth of his first son. A more cautious perusal of the Mosaic account, however, will, I think, incontestibly prove that the narrative of the creation of Adam and Eve, in the second chapter, is a mere recapitulation of what occurs in the first, to which the historian recurs, for the sole purpose of giving a minuter description of it. While as to the existence of artificers competent to the formation of the first rude instruments employed in husbandry, and a considerable population of mankind scattered over the regions adjoining that in which Cain resided at the date of his fratricide, it should be recollected, that the death of Abel did not take place till about a hundred and twenty-nine years after the creation of Adam; for it was in the one hundred and thirtieth year of the latter that Seth was given to him in the place of Abel: an interval of time, undoubtedly, amply sufficient, considering the primitive fecundity of both animals and vegetables for the multiplication of the race of man to an extent of many thousand souls. On such a view of the subject, therefore, one individual pair should seem altogether sufficient for the purpose of peopling the earth at large; and the epoch which we may suppose to have elapsed prior to the notice of agricultural instruments of any kind, must have been amply long enough for their first rude invention. To multiply causes without necessity is inconsistent with the operations of nature, and the true principles of philosophy. The variations in the structure, colour, and mental endowments of the different nations of mankind, require no such distinct and separate origin, for they may be all legitimately referred to the common operation of different climates, different customs, and different modes of education.

Hoc, ubi quæque loci regio obportuna dabatur,
Crescebant uterei terrâ, radicibus aptei:
Quos ubi tempore maturo patefecerat ætas
Infantum, fugiens humorem, aurasque petissens,
Convortebat ibei Natura foramina terræ,
Et sucum venis cogebat fundere apertis,
Consimilem lactis; sic, ut nunc femina quæque,
Quom peperit, dulci repletur lacte, quod omnis
Inpetus in mammas convortitur ille alimenti.
Terra cibum pueris, vestem vapor, herba cubile,
Præbebat, multâ et molli lanugine abundans.

At novitas mundi nec frigora dura ciebat,
Nec nimios æstus, neque magnis viribus auras:
Omnia enim pariter crescunt, et robora sumunt.
Quâ re, etiam atque etiam, maternum nomen adepta

Ver. 823. *Exuberant then, with warmth and moisture teem'd.*] To the same effect, the following exquisitely beautiful couplet of Isaiah, ch. xxvi. 19:

הקיצו ורננו שכני עפר
כי טל אורת טלך:

Awake, and sing, ye that dwell in the dust!
Behold, the dew of the day-light is thy dew!

a dew copious, and revivifying as the *exhalation* or *stream* of light that pours forth at the dawn in every direction, and *awakens* the world from the *deadness* of sleep. The interpretation appears to me not more new, than easy and obvious. The phrase in our common versions "dew of the *herbs*" is equally cold and incorrect.

Ver. 830. *With juice to flow lacteal;—*] The passage is referred to, and the idea of course condemned as equally absurd and impious, by Polignac, in his Anti-Lucr. vii. 121. and following verses.

Ver. 836. *For the fresh world, as yet, no chills severe,*] I have already cited Virgil, Georg. ii. 336, in Note on ver. 819, in which he coincides with, or rather, perhaps, has copied our poet, in describing the genial and uniform warmth of the atmosphere on the first creation of the world. To which he adds, ver. 343.

Nec res hunc teneræ possent perferre laborem:
Si non tanta quies iret, frigusque caloremque
Inter; et exciperet cœli indulgentia terras.

So, o'er each scene appropriate, myriad wombs
Shot, and expanded, to the genial sward
By fibres fixt; and as, in ripen'd hour,
Their liquid orbs the daring fetus broke
Of breath impatient, nature here transform'd
Th' assenting earth, and taught her opening veins
With juice to flow lacteal; as the fair
Now with sweet milk o'erflows, whose raptur'd breast
First hails the stranger-babe, since all absorb'd
Of nurture, to the genial tide converts.
Earth fed the nursling, the warm ether cloath'd,
And the soft downy grass his couch compos'd.

For the fresh world, as yet, no chills severe,
No parching heats, nor boist'rous whirlwinds knew;
These, like all else, by time alone matur'd.

Hence the dear name of mother, o'er and o'er,

Nor could this infant world sustain th' extremes
Of piercing winter, and hot Sirius' beams,
Did not kind heaven, the fierce excess between,
Bid gentler Spring's soft season intervene.
WARTON.

Equally beautiful is Thomson, and equally indebted to our poet:

Pure was the temperate air; an even calm
Perpetual reign'd, save what the zephyrs bland
Breath'd o'er the blue expanse; for then nor storms
Were taught to blow, nor hurricanes to rage.
SEASONS, B. I. 322.

It is highly probable, indeed, that the Roman bards are right in their conjecture, that Spring was the first season of the rising world. The superior fecundity of this quarter of the year justifies the belief, though no philosophic fact can be adduced to corroborate it. The commentators on the sacred writings are divided upon the question: for the civil and ecclesiastical year among the Hebrews began at different, and indeed opposite periods; the former commencing at the autumnal equinox, as we learn from Exod. xxiii. 16. and xxxiv. 22. and the latter at the vernal, as particularly commanded in Exod. xii. 2. At one of the equinoxes, however, it seems universally admitted that the earth first began to be inhabited; and most probably, as before observed, at the vernal.

Terra tenet merito, quoniam genus ipsa creavit
Humanum, atque animans prope certo tempore fudit
Omne, quod in magnis bacchatur montibus passim:
Aëriæque simul volucres variantibus formis.
Sed, quia finem aliquam pariundi debet habere,
Destitit; ut mulier, spatio defessa vetusto.
Mutat enim mundi naturam totius ætas,
Ex alioque alius status excipere omnia debet,
Nec manet ulla sui similis res; omnia migrant:
Omnia commutat Natura, et vortere cogit.
Namque aliud putrescit, et, ævo debile, languet;
Porro aliud concrescit, et e contemptibus exit.
Sic igitur mundi naturam totius ætas
Mutat, et ex alio terram status excipit alter:
Quod potuit, nequeat; possit, quod non tulit ante.

Multaque tum tellus etiam portenta creare
Conata est, mirâ facie membrisque coorta:
Androgynem, inter utras, nec utramque, utrimque remotum:
Orba pedum partim, manuum viduata vicissim;
Muta, sine ore, etiam; sine voltu, cæca, reperta;

Ver. 842. ——*and the birds*
Gay-wing'd, that cleave, diverse, the liquid air.]
In the original thus:
Aëriæque simul volucres variantibus formis.
Ver. 823.

to which Creech in his English version has added, of his own accord, the following curious conceit:
And various kinds of birds—*and, as they flew,*
The sun, with curious skill, the figures drew

Earth claims most justly, since the race of man
Long bore she of herself, each brutal tribe
Wild-wandering o'er the mountains, and the birds
Gay-wing'd, that cleave, diverse, the liquid air.
Yet drew, at length, the moment when herself
Could bear no longer; like her daughters since,
By age divested of parturient power.
For age the total world transforms, from state
To state for ever passing; nought remains
Long its own like; all migrates sight surveys,
Varying each hour, from change to change propell'd.
This grows and ripens, and with age corrupts;
That, from its ruins, springs, and perfects life.
So time transmutes the total world's vast frame,
From state to state urg'd on, now void of powers
Erst known, and boasting those unknown before.
Hence, doubtless, earth prodigious forms at first
Gender'd, of face and members most grotesque;
Monsters half-man, half-woman, not from each
Distant, yet neither total; shapes unsound,
Footless, and handless, void of mouth or eye,

On all their plumes; he well the art might know
He used to paint the like on his fair bow.

Neither Cowley nor Guarini can boast of any thing more extravagant.

Ver. 859. ——*shapes unsound,*
Footless,——] Hence, perhaps, Virgil:

——visenda modis animalia miris,
Trunca pedum primo.

Georg. iv. 309.

A wondrous swarm strait from the carcase crawls
Of feetless and unfinished animals.

Warton.

Vinctaque membrorum per totum corpus adhæsu,
Nec facere ut possent quidquam, nec cedere quoquam,
Nec vitare malum, nec sumere quod volet usus.
Cætera de genere hoc monstra, ac portenta, creabat:
Nequidquam; quoniam Natura absterruit auctum;
Nec potuere cupitum ætatis tangere florem,
Nec reperire cibum, nec jungi per Veneris res.
Multa, videmus, enim rebus concurrere debent,
Ut propagando possint procudere secla:
Pabula primum ut sint, genitalia deinde per artus
Semina, quæ possint membris manare remissis:
Feminaque ut maribus conjungi posset, habere
Mutua, quî meterent inter se gaudia uterque.

Multaque tum interiisse animantum secla necesse est,

Ver. 866. *Check'd their wild growth; so life's consummate flower*] Hence, Polignac, alluding to the present passage, which he afterwards combats with much debility of reasoning:

At notas præter species, quas esse videmus
In mundo, multæ consurrexere sub auras:
Casus enim quid non peperit? sed protinus illas
Extinxit sobolis defectus, et ire coegit
In tenues atomos, veluti radice recisâ:
Fecundas quoniam casus non fecerat. Illæ
Manserunt tantum, queis tunc genitalia forte
Organa contigerant, venerisque innata cupido.
Anti-Lucr. vii. 48.

But many a form, existing forms besides,
Has sprung to life, and drunk the breath of day.
For what can Chance not gender? Yet, abrupt,
Sunk they from being, impotent of sex,
Pluck'd from the root, and into air resolv'd.
For barren Chance produc'd them: while alone
Those live generic, bless'd with genial powers,
And with the darts of Venus goaded deep.

Ver. 870. ——*genial foods must spring*] A similar observation occurs in Book IV. 657: in the Note upon which I have observed, generally, that many foods, even among mankind, have, in all ages, been conceived either as more fertilizing, or more stimulative than others. Among animals, the principle is acted upon by almost all our practical breeders of cattle: but it appears to be of more consequence in the economy of bees than in that of any other family of insects or animals whatever. There is a long and curious paper upon this subject introduced into Vol. VI. of the Transactions of the Linnéan

Or from misjunction, maim'd, of limb with limb:
To act all impotent, or flee from harm,
Or nurture take their loathsome days t' extend.
These sprang at first, and things alike uncouth;
Yet vainly; for abhorrent NATURE quick
Check'd their vile growth; so life's consummate flower
Ne'er reach'd they, foods appropriate never cropp'd,
Nor tasted joys venereal. For with cause
Cause ceaseless must combine or nought can rise
Of race generic; genial foods must spring
And genial organs, from the total frame
The vital seeds concocted to collect;
And male must blend with female, and the bliss
Educ'd prove mutual, ere effect can flow.
Hence, doubtless, many a tribe has sunk supprest,

Society, by M. Huber, of Lausanne, in which this ingenious naturalist advances so far, as to attribute among the bee-tribe their difference, not only of bulk, instinct, taste, habit, and procreative power, but even of sex itself to a difference of nourishment alone.

Ver. 875. *Hence, doubtless, many a tribe has sunk supprest,*] This opinion of our poet, is considerably countenanced by modern discoveries and observations. There have been limbs and bones of animals found in almost every quarter of the globe, which never could belong to any tribes known to exist in the present day: and in some instances of such immense magnitude, that had every other bone and limb been duly proportioned, the kraken of archbishop Pontoppidan would have been no longer a wonderful production. These classes, in the language of our poet, "have, doubtless, sunk suppressed, powerless their kinds to gender." And it is probable, that, even in the time of their existence, they belonged to the number of those imperfect monsters he has been describing in the last paragraph, whose limbs were not duly proportioned to each other: and therefore, that their total bulk was not so marvellously enormous as we must otherwise necessarily admit it to have been. Many of these, unquestionably, became totally obliterated from creation, in consequence, as our poet has justly observed, of their incompetency to propagate their species: of which kind of incompetency, even where the sexual organs exist, the case of mules, and other hybrid animals, afford us instances in the present day. But it is probable, that still many more of them were destroyed by the general

Nec potuisse propagando procudere prolem.
Nam, quæquomque vides vesci vitalibus auris,
Aut dolus, aut virtus, aut denique mobilitas, est
Ex incunte ævo, genus id tutata, reservans:
Multaque sunt, nobis ex utilitate suâ quæ
Commendata manent, tutelæ tradita nostræ.
Principio, genus acre leonum, sævaque secla,
Tutata est virtus, volpeis dolus; ut fuga cervos.
At levisomna canum fido cum pectore corda,
Et genus omne, quod est veterino semine partum,
Lanigeræque simul pecudes, et bucera secla,
Omnia sunt hominum tutelæ tradita, Memmi!

Noachic deluge: and that a variety of new orders of animals have been created since that epoch. Mr. Kirwan, indeed, conceives that not more than those classes which are most necessary to the use of man, were admitted into the ark, and that these were merely granivorous, or graminivorous. He observes that, at this early period, ravenous animals were not only unnecessary, but must have been even destructive to those that had just obtained an existence, and probably not in great numbers: and that they did not become requisite till the graminivorous orders had multiplied to so great a degree, that their carcases would have spread infection. Hence he maintains, that all the ravenous tribes must have been of posterior creation; and to this he attributes the existence of those that are peculiar to America and the torrid and frigid zones.

But this is mere conjecture: let us support our poet by an appeal to sober fact. The fossile remains of animals supposed to have been Asiatic, found frequently in Russia and Siberia, and conceived by Pallas and Gmelin to have appertained to the elephant, are now clearly proved by M. Cuvier to be those of some other animal, whose species is no longer discovered alive. The inhabitants of these countries, indeed, believe that the animal still exists, but that it burrows under the earth, and hence account for its invisibility. In M. Cuvier's opinion, this species is probably lost. In the memoirs of the National Institute (Sciences Phys. et Mat. II.) he has thus characterised it, Elephas mammonteus, maxillâ obtusiore, lamellis molarium tenuibus rectis. In the same memoir he enumerates another species of the same animal, supposed to be lost also, but whose fossilized bones are detected on the banks of the Ohio, and in other parts of the American continent. The character of this last exists thus in M. Cuvier's memoir: Elephas Americanus, molaribus multi-cuspidibus, lamellis post detritionem quadrilobatis.—Though the fossilized thigh-bone of this animal resemble the elephant, M. Daubenton, the late indefatigable colleague of Buffon, thought the teeth were those of the hippopotamus, and conceived that the animal partook of both these species, and was a real mule—whence, in the language of our poet, its

Powerless its kind to gender. For whate'er
Feeds on the living ether, craft or speed,
Or courage stern, from age to age preserves
In ranks uninjur'd: while full many a class
Man guards himself incited by their use.

In strength ferocious thus the lion trusts,
In guile the fox, the stag in peerless flight;
While the light-slumb'ring dog, of heart sincere,
The bounding courser, herds, and fleecy flocks,
These, Memmius, these protection claim from man.

——tribe has sunk supprest,
Powerless its kind to gender.

M. Cuvier is at this moment engaged in amassing a museum of animal fossils, for the express purpose of deciding, as far as is practicable, the number of species of animals that are now actually lost to the world. No man can be better qualified for the purpose, or possessed of more activity. Some knowledge, indeed, of his activity, and the extent of his inquiries, may be collected from an express dissertation he has lately published (1801) Sur les Espéces de Quadrupédes dont on a trouvé les ossemens dans l'interieur de la Terre. In the course of two years alone, being the period in which he had then applied himself to this immediate study, he was able, by his own diligence, and the assistance of his friends, to ascertain not less than twenty-three species, at present unknown, but whose existence in remote ages is ascertained by their remains. "This remarkable quantity," says he, "has been collected and ascertained, in not more than two years, by an individual, who has enjoyed no other means, in favour of his zoological pursuits, than his own zeal, and the assistance of a few scientific friends.—If so many lost species have been thus established in so few months, how many more may we not suppose are still in existence, though hitherto undiscovered." M. Cuvier conceives, that there has been a total change of animals since the earlier ages; asserting, that none of the fossil bones hitherto discovered, in such a state of preservation as to admit comparison, resemble those of living animals. And in his memoir he advances still farther indeed than our poet would perhaps have chosen to follow him: "Qu'on se demande," says he, towards its conclusion, "pourquoi on trouve tant de depouilles d'animaux inconnus, tandi qu'on n'en trouve presque aucune dont on puisse dire qu'elle appartient aux espèces que nous connoissons, et l'on verra combien il est probable qu'elles ont appartenu à des êtres d'un monde antérieur au notre, à des êtres detruits par quelques révolutions de ce globe; êtres dont ceux qui existent aujourd'hui ont rempli la place, pour se voir, peut-être, un jour également detruits et remplacés par d' autres."

Nam cupide fugere feras, pacemque sequutæ
Sunt, et larga suo sine pabula parta labore:
Quæ damus utilitatis eorum præmia caussâ.
At, queis nihil horum tribuit Natura, neque ipsa
Sponte suâ possent ut vivere, nec dare nobis
Utilitatem aliquam, quâ re pateremur eorum
Præsidio nostro pasci genus, esseque tutum;
Scilicet hæc aliis prædæ, lucroque, jacebant
Indupedita suis fatalibus omnia vinclis,
Donec ad interitum genus id Natura redegit.
Sed neque Centaurei fuerant, nec tempore in ullo
Esse queunt; duplici naturâ et corpore bino
Ex alienigenis membris conpacta potestas,
Hinc illinc par vis ut non sic esse potissit:
Id licet hinc quam vis hebeti cognoscere corde.
Principio, circum tribus actis inpiger annis

Ver. 896. *Yet* Centaurs *liv'd not;*——] The Centaur was an imaginary monster, with its upper part resembling the form of a man, and its lower that of a horse. Its existence was credited, not only by the people and the poets, but also by several of the philosophers. Empedocles countenanced the creed, and Pliny positively declares, that he once beheld one himself: "Hippocentaurum," says he, "in Thessaliâ natum eodem die interiisse; et nos principatu ejus allatum illi ex Ægypto in melle vidimus." A Centaur was born in Thessaly, and died the same day, and I myself saw it, when, by the command of Claudius Cæsar, it was brought to him from Egypt, embalmed in honey." There can be no doubt, however, that this was nothing more than the monstrous fetus of some beast, bearing a kind of resemblance to this imaginary prodigy, and which the well-known credulity of the Roman naturalist interpreted into a perfect animal. Our poet, in thorough consonance with the principles of his own system, has ingeniously accounted for the origin of such a belief, as well as that of all other monsters of a similar kind, in Book IV. 756, by supposing them to be the crude and fanciful conjunctions of the filmy emanations of different animals in the atmosphere:

For the wild semblance of a centaur yet
Ne'er flowed from centaurs living; nature such
Creating never; but when once in air
A man's light image with a horse's meets,

For these the baser broods fly anxious, fond
Of quiet soft, and meals themselves ne'er bought;
Boons we bestow from certainty of gain.
But those such powers that boast not, void of means
Form'd, for defence, nor tribute to mankind
Repaying ever—why should human aid
To such be lent redeeming them from death?
These, from their native bondage, must perforce
Fall to the feller, sports, and victims rude,
Till the whole order cease, from earth extinct.

Yet Centaurs liv'd not; nor could shapes like these
Live ever, from two different natures rear'd,
Discordant limbs, and powers by powers revers'd.
E'en this the dullest thus with ease may learn.

The steed, o'er whom the year has thrice revolv'd,

Quick they cohere, as just maintain'd, since rear'd
Of subtlest texture, and the phantom springs.

Hence the epithet of nubigenæ, "*cloud-begotten*," applied to such monsters by Virgil, Æn. vii. 674. and the popular fable, that they were the offspring of Ixion upon a cloud. According to other writers, however, the belief of these prodigious shapes originated from the appearance of the first horsemen of Thessaly, who, when surveyed by the ignorant multitude of adjoining countries, were immediately conceived to constitute, together with the horses they were riding, but one individual animal. And hence, the facetious Butler, in his description of Sir Hudibras:

That which of Centaur long ago
Was said, and has been wrested to
Some other knights, was true of this,
He and his horse were of a piece.

II. ii. 445.

In denying the existence of such monsters, Frachetta admits that our author is correct, but lest he should hereby be too liberal in his praise, he denies, at the same time, that his reasoning applies to the vegetable world: although, in truth, it applies just as forcibly to the one department of nature as the other. "Il qual di corso Lucretiano, e per lo più vero parlando i degli animali, ma non delle piante; molte delle quali s'innestano una ovvaltra. Brev. Sposit. in loco.

Floret equus; puer haud ita quâquam: sæpe etiam nunc
Ubera mammarum insomnis lactantia quæret.
Post, ubi equum validæ vires, ætate senectâ,
Membraque deficiunt, fugienti languida vitâ;
Tum demum, puerili ævo florente, juventas
Obficit, et molli vestit lanugine malas:
Ne forte ex homine, et veterino semine equorum,
Confieri credas Centauros posse, neque esse:
Aut, rabidis canibus subcinctas, semimarinis
Corporibus Scyllas; et cætera de genere horum,
Inter se quorum discordia membra videmus:
Quæ neque florescunt pariter, nec robora sumunt
Corporibus, neque perficiunt ætate senectâ;
Nec simili Venere ardescunt, nec moribus unis
Conveniunt; neque sunt eadem jocunda per artus:
Quippe videre licet pinguescere sæpe cicutâ
Barbigeras pecudes, homini quæ est acre venenum.

Ver. 907. *And the soft down sprouts earliest from his chin.*] In the original, ver. 887:

——et molli vestit lanugine malas.

Whence Virgil, doubtless:

——flaventem *prima lanugine malas*
Dum sequeris Clytium.

Æn. x. 324.

Whilst Clytius thou pursu'st, whose auburn cheeks
Now sprout with earliest down.

Ver. 910. *Or, false alike, that* Scyllas *e'er exist,*] To the same effect, Cicero, Nat. Deor. i. 38. "Quid, quod earum rerum (imagines incurrunt in animum) quæ numquam omnino fuerunt neque esse potuerunt, ut *Scyllæ*, ut Chimeræ?" The monster Scylla was feigned by the poets, and believed by the people to resemble a woman in her face and superior limbs, and to be a kind of Cerberus, or assemblage of dogs' heads about her middle. The fable relating to her is too trite for repetition. Milton, with much felicity of taste, has adopted the figure of this hideous phantom,

Grows firm and vigorous; but the babe a babe
Still proves, and haply still explores, asleep,
The dulcet breast whose stores were late his own.
When, too, the steed's strong fibres faint with age,
And every member feels the coming fate,
Youth o'er the boy his fairest flower expands
And the soft down sprouts earliest from his chin.
Deem not that man, then, and the servile horse,
Seeds mixt with seeds, can Centaurs e'er create:
Or, false alike, that Scyllas e'er exist,
Half-maid, half-mastiff; or aught else of shape
Engender'd equal, dissonant of limb,
Whose flow'ry strength at different age matures,
And fades as different; whose connubial fires
Burn not the same; whose total tempers jar,
And from discordant foods who nurture life:
For hemlock, oft, rank poison to mankind,
Fattens the bearded goat with foul repast.

---

and applied it to his personification of Sin, the portress of the gate of hell:

She seem'd a woman to the waist, and fair,
But ended foul in many a scaly fold,
Voluminous and vast; a serpent armed
With mortal sting. About her middle round
A cry of hell-hounds, never-ceasing, bark'd
With wide Cerberian mouths, full loud, and rung
A hideous peal: yet, when they list, would creep,
If aught disturb'd their noise, into her womb,
And kennel there; yet there still bark'd, and howl'd
Within unseen. Far less abhorr'd than her
Vex'd Scylla, bathing in the sea that parts
Calabria from the hoarse Trinacrian shore.

Ver. 917. *For hemlock, oft, rank poison to mankind, Fattens the bearded goat*——] See Note on Book IV. v. 657.

Flamma quidem vero quom corpora fulva leonum
Tam soleat torrere atque urere, quam genus omne
Visceris, in terris quodquomque, et sanguinis, exstet:
Quî fieri potuit, triplici cum corpore ut unâ,
Prima leo, postrema draco, medio ipsa chimæra,
Ore ferox acrem flaret de corpore flammam?

Quâ re, etiam tellure novâ, cœloque recenti,
Talia qui fingit potuisse animalia gigni,
Nixus in hoc uno, novitatis nomine inani;
Multa licet, simili ratione, ecfutiat ore.
Aurea tum dicat per terras flumina volgo
Fluxisse, et gemmis florere arbusta suësse:
Aut hominem tanto membrorum esse inpete natum,
Trans maria alta pedum nixus ut pandere posset,
Et manibus totum circum se vortere cœlum.
Nam, quod multa fuere in terris semina rerum,
Tempore quo primum tellus animalia fudit;
Nihil tamen est signi, mixtas potuisse creari
Inter se pecudes, conpactaque membra animantum:

Ver. 921. *Whence, when three natures into one combine,*
The front a lion forming, the vile rump] Of this imaginary monster, the Chimera, Hesiod gives a similar description:

Προσθε λεων, οπιθεν δε δρακων, μεσση δε χιμαιρα,
Δεινον αποπνειουσα πυρος μενος αιθομενοιο.
Theog. 323.

Lion in front, a dragon was its rear,
Its midst a goat, wild vortices of flame
Snorting, tremendous.

Our poet is so minute in his description, that no comment is necessary. The monster derived his fabulous origin, according to Pliny, from a volcanic mountain of the name of Chimæra in Lycia, whose

So, too, since flame the lion's tawny skin
As fiercely burns as aught of brute besides,
Whence, when three natures into one combine,
The front a lion forming, the vile rump
A dragon, and the midst a goat grotesque,
Hence term'd Chimera, can the breathing lungs
Pour streams of fire innocuous from the mouth?
Hence those who hold, when heaven and earth were new,
Urg'd by that newness as their total proof,
Such monsters rose, and shapes alike absurd,
On equal ground might feign the world's first floods
Were liquid gold, her earliest blossoms pearls,
And the first men such massy limbs display'd
That seas might rush beneath each ample stride,
And their vast fingers twirl the heaven's high orb.
But though, commixt, then various seeds of things
Throng'd through the teeming soil, it flows not hence
That tribes unlike sprang forth with blended limbs.

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summit was the haunt of lions, and frequently belched forth large volumes of flames; whose middle was the abode of goats, in consequence of the peculiar herbage that grew there; and whose base afforded a convenient asylum for serpents.

By several modern biblicists it is supposed to have been derived from the *Cherubim* of the temple of Solomon, fabulously converted into a living object of adoration. But they do not appear to be supported in such a conjecture.

Ver. 931. *And the first men such massy limbs display'd*
That seas might rush beneath each ample stride.]
See Note on Book I. v. 251.

Propterea, quia, quæ de terris nunc quoque abundant,
Herbarum genera, ac fruges, arbustaque læta,
Non tamen inter se possunt conplexa creari.
Sed, si quæque suo ritu procedit, et omnes,
Fœdere naturæ certo, discrimina servant.
Et genus humanum multo fuit illud in arvis
Durius, ut decuit, tellus quod dura creasset;
Et majoribus, et solidis magis, ossibus intus
Fundatum; validis aptum per viscera nervis:
Nec facile ex æstu, nec frigore, quod caperetur;
Nec novitate cibi, neque labi corporis ullâ.
Multaque per cœlum solis volventia lustra
Volgivago vitam tractabant more ferarum.
Nec robustus erat curvi moderator aratri;
Quisquam nec scibat ferro molirier arva,
Nec nova defodere in terram virgulta, neque altis
Arboribus veteres decidere falcibus ramos.

Ver. 943. ——*was hardier far;*
Strong built with ampler bones,——] The philosophers as well as the poets of Greece and Rome, seem to have concurred in a belief of the superior strength and longevity of the inhabitants of the antediluvian world. The same idea prevailed in Egypt, and is authorized by the Jewish scriptures. From this universal doctrine of ancient æras, the moderns do not dissent. It is perfectly consistent with the theories of Des Cartes and Buffon: and Mr. Whitehurst has openly maintained it, with much force of argument. Yet Mr. Kirwan is, I think, still more explicit upon the subject; and the reader will readily excuse my transcribing from his Geological Essays, the following passage so scientifically illustrative of our poet's assertion. "Soon after the creation of vegetables, and in proportion as they grew and multiplied, vast quantities of oxygen must have been thrown off by them into the then existing atmosphere, without any proportional counteracting diminution from the respiration, or putrefaction of animals, as these were created only in pairs, and multiplied more slowly. Hence it must have been much purer than at present: *and to this circumstance, perhaps, the longevity of the antediluvians may, in great measure, be attributed.* After the flood, the state of

Still from the soil herbs, fruits, and trees diverse
Shoot in profusion; but each separate class
Ne'er blends prepost'rous. Things throughout proceed
In firm, undevious order, and maintain,
To nature true, their fixt generic stamp.
Yet man's first sons, as o'er the fields they trod,
Rear'd from the hardy earth, were hardier far;
Strong built with ampler bones, with muscles nerv'd
Broad and substantial; to the power of heat,
Of cold, of varying viands, and disease,
Each hour superior; the wild lives of beasts
Leading, while many a lustre o'er them roll'd.
Nor crooked plough-share knew they, nor to drive,
Deep through the soil, the rich-returning spade;
Nor how the tender seedling to replant,
Nor from the fruit-tree prune the wither'd branch.

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things was perfectly reversed, the surface of the earth was covered with dead and putrifying land-animals, and fishes, which copiously absorbed the oxygenous part of the atmosphere, and supplied only mephitic and fixed air. Thus the atmosphere was probably brought to its actual state, containing little more than one fourth of pure air, and three-fourths of mephitic. *Hence the constitution of men must have been weakened, and the lives of their enfeebled posterity gradually reduced to their present standard.*"

Ver. 919. *Nor crooked plough-share knew they, nor to drive.*] Not dissimilar is the following description of the first race of man in Ovid:

Ipsa quoque immunis, rastroque intacta, nec ullis
Saucia vomeribus, per se dabat omnia tellus.
Contentique cibis, nullo cogente creatis,
Arbuteos fetus, montanaque fraga legebant
Cornaque, et in duris hærentia mora rubetis,
Et quæ deciderant patulâ Jovis arbore glandes.
Met. i.

Free in herself; by furrows undisturb'd,
Unhurt by ploughs, earth every want supplied.
Content with Nature's gifts, spontaneous pour'd,
The hip, the haw, the berry blushing deep
O'er thorn, or mountain, pluck'd they, apples wild,
And acorns scatter'd from the tree of Jove.

Quod sol atque imbres dederant, quod terra crearat
Sponte suâ, satis id placabat pectora donum.
Glandiferas inter curabant corpora quercus
Plerumque; et, quæ nunc hyberno tempore cernis,
Arbuta puniceo fieri matura colore,
Plurima tum tellus, etiam majora, ferebat:
Multaque præterea novitas tum florida mundi
Pabula dira tulit, miseris mortalibus ampla.
At sedare sitim fluviei, funtesque, vocabant;
Ut nunc montibus e magnis decursus aquaï
Claricitat late sitientia secla ferarum.
Denique, nota vagis, sylvestria templa tenebant
Nympharum; quibus excibant humore fluenta
Lubrica, proluvie largâ lavere humida saxa,

Ver. 953. *What showers bestow'd, what earth spontaneous bore,*] Much of this beautiful passage is thus excellently imitated by Dr. Warton:

Happy the first of men ere yet confin'd
To smoaky cities; who, in shelt'ring groves,
Warm caves, and deep-sunk vallies, liv'd, and lov'd,
By cares unwounded: what the sun and show'rs,
And genial earth untillag'd could produce,
They gather'd grateful, or the acorn brown,
Or blushing berry; by the liquid lapse
Of murmuring waters, call'd to slake their thirst,
Or, with fair nymphs, their sun-brown limbs to bathe.

Ver. 955. *But acorn-meals chief cull'd they from the shade*
Of forest-oaks;——] It is in allusion to this kind of primeval diet, prior to the civilization of man, that Virgil thus breaks forth:

Heu, magnum alterius frustra spectabis acervum,
Concussaque famem in sylvis solabere quercu.
Georg. i. 158.

Alas! thy neighbour's stores with envy view'd,
Thou'lt shake from forest-oaks thy tasteless food.
Warton.

Ver. 957. *The wild wood-whortle with its purple fruit*] In the original, ver. 939.:

Arbuta puniceo fieri matura colore.

The commentators and translators have uniformly understood, by the arbutus here spoken of, the arborescent and garden strawberry-tree, celebrated for its shade, both in ancient and modern Italy, bearing a crimson fruit about the size of an Orleans plum, and with a leaf not much unlike that of the bay-tree. But the fruit produced by this tree is extremely sour and unpleasant to the taste: nor is it ever employed for purposes of food.

What showers bestow'd, what earth spontaneous bore,
And suns matur'd, their craving breasts appeas'd.
But acorn-meals chief cull'd they from the shade
Of forest-oaks; and, in their wintry months,
The wild wood-whortle with its purple fruit
Fed them, then larger and more amply pour'd.
And many a boon besides, now long extinct,
The fresh-form'd earth her hapless offspring dealt.
Then floods, and fountains, too, their thirst to slake,
Call'd them, as now the cataract abrupt
Calls, when athirst, the desert's savage tribes.
And, through the night still wand'ring, they the caves
Throng'd of the wood-nymphs, whence the babbling well
Gush'd oft profuse, and down its pebbly sides,

Of the arbutus, there are several varieties: but I am persuaded that our poet here refers to that denominated by Caspar Bauhine Vitis Idæa, the common whortle, or cranberry, which is frequent in the wild heaths and thickets of almost every country in Europe, as well as America, and the fruit of which is even to this day gathered for food by the poor inhabitants of the villages in which it grows. This latter shrub rises about two feet from the ground; its flowers are shaped like those of the strawberry-tree; and its fruit is about the size of the juniper-berry, and of a deep purple dye, with a flue upon it like that of the Orleans plum, which is rubbed off by the slightest touch. The whortle-berry has an agreeable subacid flavour when tasted alone: but in the present day it is more generally eaten with cream or milk, sweetened with sugar, or else in the form of preserves; in which latter state it is very largely made use of in Russia, and, indeed, among all the Northern nations.

Ver. 961. *Then floods, and fountains, too, their thirst to slake,*] Hence, as Macrobius observes, the following passage of Virgil:

Frondibus et victu pascuntur simplicis herbæ:
Pocula sunt fontes liquidi, atque exercita cursu
Flumina: nec somnos abrumpit cura salubres.
GEORG. iii. 528.

His food is leafy brouze, and nature's grass;
His draught fresh rills, that through the meadows pass;
Or torrents rushing from the rocky steep;
Nor care disturbs his salutary sleep. WARTON.

Ver. 966. *——and down its pebbly sides,*
Its pebbly sides with verdant moss o'erspread,]
The repetition here exhibited, occurs equally in the original, ver. 948:

——proluvie largâ lavere humida saxa,
Humida saxa, super viridi stillantia musco;

Humida saxa, super viridi stillantia musco;
Et partim plano scatere, atque erumpere, campo.
Nec dum res igni scibant tractare, neque uti
Pellibus, et spoliis corpus vestire ferarum:
Sed nemora, atque cavos monteis, sylvasque, colebant;
Et frutices inter condebant squalida membra,
Verbera ventorum vitare, imbreisque, coactei.
Nec commune bonum poterant spectare, neque ullis
Moribus inter se scierant, nec legibus, uti.
Quod quoique obtulerat prædæ fortuna, ferebat;
Sponte suâ sibi quisque valere, et vivere, doctus.
Et Venus in sylvis jungebat corpora amantum:
Conciliabat enim vel mutua quamque cupido,
Vel violenta viri vis, atque inpensa lubido;
Vel pretium, glandes, atque arbuta, vel pira, lecta.

In modern poetry, we not unfrequently meet with the same iterative figure. Thus Dyer, very beautifully:

Mean time, in pleasing care, the pilot steers
Steady; with eye intent upon the steel,
Steady, before the breeze, the pilot steers.
Fleece, iv. 5.

So Cowper, in his exquisite description of Omia:

Thus Fancy paints thee, and, though apt to err,
Perhaps, errs little, when she paints thee thus.
Task i.

Marchetti has not omitted this elegant turn, in his version:

E dal fango lavar gli umidi sassi,
Gli umidi sassi, sopra il verde musco
D'umor chiaro stillanti.

Ver. 971. *But groves conceal'd them,*——] The following parallel painting of Ovid is not unworthy of a comparison with our poet:

Vita feræ similis, nullos agitata per usus:
Artis adhuc expers, et rude, vulgus erant.
Pro domibus frondes nôrant, pro frugibus herbas:
Nectar erat palmis hausta duabus aqua.
Nullus anhelabat sub adunco vomere taurus:
Nulla sub imperio terra colentis erat.
Fast. ii. 291.

Like the wild herds, inactive, unemploy'd,
Void of all art, a barb'rous race, they rov'd.
Leaves were their homes, their food the vagrant herb;
The stream their nectar, scoop'd with double palms.

Its pebbly sides with verdant moss o'erspread,
Ooz'd slow, or sought, redundant sought, the plains.
Nor knew they yet the crackling blaze t' excite,
Or cloath their limbs with furs, or savage hides.
But groves conceal'd them, woods, and hollow hills;
And, when rude rains, or bitter blasts o'erpower'd,
Low bushy shrubs their squalid members wrapp'd.
Nor public weal they boasted, nor the bonds
Sacred of laws, and order; what loose chance
Offer'd, each seiz'd instinctive; for himself,
His life, his limbs, instructed sole to care.
Wild in the forests they fulfill'd their loves,
Or urg'd by mutual raptures, or the male,
Stung by fierce lust the female form subdu'd,
Or bought her favours by the tempting bait
Of acorns, crabs, or berries blushing deep.

Beneath the crooked share no bullock toil'd,
No cultur'd glebe confess'd a master's sway.

Ver. 982. ——*crabs, or berries blushing deep.*] In the original, ver. 963:

——arbuta, vel pira.

On the arbutum, or fruit of the arbutus, here referred to, I have already remarked, in Note on v. 957. above: and pointed out the common error into which the commentators have fallen, in their explanation of this term. A similar error exists in their interpreting the word *pira* by that of *pears*. Pears are a *cultivated* fruit, introduced, indeed, by engrafting or inoculation, alone, from the wild crab, which is the common origin of the pear, the apple, and the quince. Linnæus has hence, with much propriety, ranked the whole of these species under one common genus; to which he has given the general name of *pirus*; as he has ranked the different varieties of the strawberry-tree, whortleberry, and cranberry, under one genus equally common, which he has distinguished by the name of *arbutus*. And as the arbutus of our poet means the wild whortle of our heaths and thickets, so the pirus means the crab, or wild uncultivated apple of most parts of Europe.—The Tomberong-berries (rhamnus lotus of Linnæus) constitute, even at present, the chief food of the interior Africans: and hence the Lybian lotophagi of Pliny. See Park's Travels in Africa.

Et, manuum mirâ fretei virtute, pedumque,
Conflictabantur sylvestria secla ferarum
Missilibus saxis, et magno pondere clavæ;
Multaque vincebant, vitabant pauca latebris:
Setigerisque pares subus sylvestribus, membra
Nudabant terræ, nocturno tempore captei,
Circum se foliis, ac frundibus, involuentes.

Nec plangore diem magno, solemque, per agros
Quærebant, pavidei palantes noctis in umbris;
Sed tacitei respectabant, somnoque sepultei,
Dum roseâ face sol inferret lumina cœlo.
A parvis quod enim consuerant cernere semper,
Alterno tenebras, et lucem, tempore gigni,
Non erat, ut fieri posset mirarier umquam,
Nec diffidere, ne terras æterna teneret
Nox, in perpetuum detracto lumine solis;
Sed magis illud erat curæ, quod secla ferarum
Infestam miseris faciebant sæpe quietem;
Ejecteique domo, fugiebant saxea tecta
Spumigeri suis adventu, validique leonis;
Atque intempestâ cedebant nocte, paventes,

Ver. 1001. *The foamy boar,——*] In the original, as concurrent with all the oldest and most approved authorities, ver. 983:

Spumigeri suis adventu,——

But the editors of modern times, as Mr. Wakefield, with his usual accuracy, observes, finding the epithet *setiger* "*bristly*," applied to the same animal a few verses only above (see ver. 988 of this edition) have agreed, with unpardonable audacity, to expunge the term *spumiger*, and repeat *setiger* in its stead: as though our poet were not at liberty to adorn his de-

And in their keen rapidity of hand
And foot confiding, oft the savage train
With missile stones they hunted, or the force
Of clubs enormous; many a tribe they fell'd,
Yet some in caves shunn'd, cautious; where, at night,
Throng'd they, like bristly swine; their naked limbs
With herbs and leaves entwining. Nought of fear
Urg'd them to quit the darkness, and recall,
With clam'rous cries, the sun-shine and the day:
But sound they sunk in deep, oblivious sleep,
Till o'er the mountains blush'd the roseat dawn.
For, from their birth, with ceaseless sight they trac'd
Night and the noon alternate, nor e'en once
Sprang the dread thought that such alternate night
Would ere long reign eternal, and the noon
O'er their clos'd eye-balls never glitter more.
This ne'er distress'd them, but the fear alone
Some ruthless monster might their dreams molest,
The foamy boar, or lion, from their caves
Drive them aghast beneath the midnight shade,

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scriptions with a variety of adjuncts; or it were more graceful to confine ourselves to the poverty of one individual epithet alone.

In the versions of this passage, the epithet has altogether escaped the greater part of the translators. Marchetti, however, has, in both places, paid a due attention to the appropriate term; and the Baron de Coutures, while he admits the modern alteration of *setiger* into the text, which correspondently accompanies his own labours, deviates from it in his translation, and introduces the proper adjunct *cruman*.

Hospitibus sævis instrata cubilia frunde.
Nec nimio tum plus, quam nunc, mortalia secla
Dulcia linquebant lamentis lumina vitæ.
Unus enim tum quisque magis deprensus eorum
Pabula viva feris præbebat, dentibus haustus:
Et nemora ac monteis gemitu, sylvasque, replebat,
Viva videns vivo sepeliri viscera busto:
At, quos ecfugium servarat, corpore adeso,
Posterius, tremulas super ulcera tetra tenentes
Palmas, horriferis adcibant vocibus Orcum:
Denique, eos vitâ privarant vermina sæva,
Experteis opis; ignaros, quid volnera vellent:
At non multa virûm sub signis milia ducta
Una dies dabat exitio; nec turbida ponti
Æquora lædebant naveis ad saxa, virosque:
Nec, temere, in cassum frustra, mare, sæpe coortum,

Ver. 1004. *Yet then scarce more of mortal race than now*
Left the sweet lustre of the liquid day.] The original is exquisitely beautiful:

Nec nimio tum plus, quam nunc, mortalia secla
Dulcia linquebant lamentis lumina vitæ.

Ver. 986.

Which the version of Guernier, equally bold and unfaithful to the declaration itself, thus renders: "And yet in those times *fewer* died than do now." Lucretius, however, asserts, instead of *fewer*, that *rather more* died.

Ver. 1013. ——*vile worms devour'd them, void of aid,*] We are here easily reminded of the lamentation of Achilles over his fallen friend Patroclus:

Δειδω μη μοι τοφρα Μενοιτιου αλκιμον υιον
Μυιαι καδδυσαι κατα χαλκοτυπους ωτειλας
Ευλας εγγενωνται, αεικισσωσι δε νεκρον.
Εκ δ' αιων πεφαται, κατα δε χρυα παντα σαπειη.
Il. T. 24.

Now to the bloody battle let me bend:
But ah! the relics of my slaughter'd friend!
In those wide wounds, through which his spirit fled,
Shall *flies, and worms obscene*, pollute the dead.
Pope.

Ver. 1015. *But thousands, then, the pomps of war beneath,*] Thus paraphrased by Marchetti:

And seize their leaf-wrought couches for themselves.
Yet then scarce more of mortal race than now
Left the sweet lustre of the liquid day.
Some, doubtless, oft the prowling monsters gaunt
Grasp'd in their jaws, abrupt; whence, through the groves,
The woods, the mountains, they vociferous groan'd,
Destin'd thus living to a living tomb.
And some, by flight though sav'd from present fate,
Cov'ring their fetid ulcers with their hands,
Prone o'er the ground death still, with horrid voice,
Call'd, till vile worms devour'd them, void of aid,
And all-unskill'd their deadly pangs t' appease.
But thousands, then, the pomps of war beneath,
Fell not at once; nor ocean's boist'rous waves
Wreck'd, o'er rough rocks, whole fleets and countless crews.
Nor ocean then, though oft to frenzy wrought,

Non però mille, e mille schiere anchise
Vedeansi'n un sol giorno orribilmente
Tinger di sangue i mari, e d' ogn' intorno
La terra seminar d'ossa insepolte.

Ver. 1016. ——*nor ocean's boist'rous waves*] To the same effect, Manilius:

Immotusque novos pontus subduxerat orbes:
Nec vitam pelago, nec ventis credere vota
Audebant, sed quisque satis se nosse putabat.
i. 76.

Round worlds unknown, th' unruffled ocean play'd,
Nor to the winds their vows, the waves their limbs
Dar'd trust they: each with what he knew content.

Not dissimilar from the following of Ercilla:

——en su tierra
Jamas del mar creyò la desventura.
Araucana, xiii. 129.

——each safe at home
Ne'er trusted ocean's misadventurous tide.

Ver. 1018. *Nor ocean then,*——] I read, with Mr. Wakefield, from all the books of authority,

Nec, temere, in cassum frustra, mare sæpe coortum.
Ver. 1000.

The editors, of their own wilfulness, have changed it to

Sed temere, incassum, mare fluctibus sæpe coortis.

Sævibat; leviterque minas ponebat inaneis.
Nec poterat quemquam placidi pellacia ponti
Subdola perlicere in fraudem ridentibus undis:
Inproba navigii ratio tum cæca jacebat.
Tum penuria deinde cibi languentia leto
Membra dabat; contra nunc rerum copia mersat.
Illei inprudentes ipsei sibi sæpe venenum
Vergebant; nunc dant aliis solertius ipsei.
Inde casas postquam, ac pelleis, ignemque, pararunt;
Et mulier, conjuncta viro, concessit in unum,
Castaque privatæ Veneris connubia læta
Cognita sunt, prolemque ex se videre creatam;
Tum genus humanum primum mollescere cœpit.

Ver. 1020. ——*could e'er his traitor face*
Lead, o'er the laughing waves, mistrustful man,]
Whence the following severe execration of Camoens:

O maldito o primiero que no mundo
Nas ondas vella pòs em seco lenho,
Dino da eterna pena do profundo,
Se he justa a justa que sigo, e tenho:
Nunca juyzo algum alto, e profundo,
Nem cythara sonora, on vivo engenho,
Te dé por isso fama, nem memoria,
Mas contigo se acabe o nome, e gloria.
Lusiad, Cant. iv. 102.

Curst be the man who first, on floating wood,
Forsook the beach, and brav'd the treach'rous flood.
Oh! never, never may the sacred Nine,
To crown his brows, the hallow'd wreath entwine;
Nor may his name to future times resound,
Oblivion be his meed, and hell profound!
Mickle.

In the following excellent lines of Sylvester's translation of Du-Bartas, it should almost seem that the original author had had his eye directed to the very passage in the text: the style, subject, and imagery, have an equal resemblance:

Never pale Envy's poisonous heads do hiss
To gnaw his heart; nor vulture Avarice.
His field's bounds bound his thoughts: *he never sups*
For nectar, poison mixt in silver cups:—
His hand's his bowl, better than plate or glass,
The silver brook his sweetest hypocrass.
Milk, cheese, and fruit, fruits of his own endeavour,
Drest without dressing, hath he ready ever.
No fained chiding, no foul-jarring noise
"Disturb" his brain, or interrupt his joys;
But cheerful birds chirping him sweet good-morrows!
With Nature's music do beguile his sorrows,
Teaching the fragrant forests, day by day,
The diapason of their heav'nly lay;

Could aught indulge but ineffectual ire:
Nor, lull'd to calms, could e'er his traitor face
Lead, o'er the laughing waves, mistrustful man,
Untaught the dangerous science of the seas.
Then want consum'd their languid members, now
Full-gorg'd excess devours us: they themselves
Fed, heedless, oft with poisons; ofter still
Men now for others mix the fatal cup.
Yet when, at length, rude huts they first devis'd,
And fires, and garments; and, in union sweet,
Man wedded woman, the pure joys indulg'd
Of chaste connubial love, and children rose,
The rough barbarians soften'd. The warm hearth

And leading all his life at home in peace
Always in sight of his own smoke, *no seas*
No other seas he knows, nor other torrent
Than that which waters with his silver current
His native meadows: *and that very earth*
Shall give him burial, which first gave him birth.
W. i. D. 3.

Ver. 1023. *Then want consum'd their languid members, now*
Full-gorg'd excess devours us:——] There is something so pleasantly elegant in Creech's version of this passage, that I cannot suppress it.

Then want, now surfeits bring a hasty death,
Our bellies swell so much, they stop our breath.

It is needless to add, that all the merit of this last verse is his own.

How different the classical pen of Dr. J. Warton, when copying the whole of this passage, and adverting to the inimitable bard who gave it birth:

In Earth's first infancy, (as sung the bard
Who strongly painted what he boldly thought,)
Though the fierce North oft smote with iron whip
Their shivering limbs, though oft the bristly boar
Or hungry lion woke them with their howls,
And scar'd them from their moss-grown caves to rove
Houseless and cold in dark tempestuous nights;
Yet were not myriads in embattled fields
Swept off at once, nor had the raging seas
O'erwhelm'd the foundering bark, and shivering crew:
In vain the glassy ocean smil'd, to tempt
The jolly sailor, unsuspecting harm;
For Commerce ne'er had spread her swelling sails,
Nor had the wondering Nereids ever heard
The dashing oar; then famine, want, and pine
Sunk to the grave their fainting limbs; but us
Diseaseful dainties, riot and excess,
And feverish luxury destroy. In brakes,
Or marshes wild, unknowingly they cropp'd
Herbs of malignant juice: to realms remote,
While we for powerful potions madly roam,
From every noxious herb collecting death

Ignis enim curavit, ut alsia corpora frigus
Non ita jam possent cœli sub tegmine ferre :
Et Venus inminuit vireis ; puereique parentum
Blanditiis facile ingenium fregere superbum.
Tunc et amicitiem cœperunt jungere habentes
Finitumei inter se, nec lædere, nec violare ;
Et pueros conmendarunt, muliebreque seclum,
Vocibus, et gestu ; quom balbe significarent,
Inbecillorum esse æquum misererier omni.
Non tamen omnimodis poterat concordia gigni :
Sed bona magnaque pars servabat fœdera, castei ;
Aut genus humanum jam tum foret omne peremptum,
Nec potuisset adhuc perducere secla propago.
At varios linguæ sonitus natura subegit
Mittere, et utilitas expressit nomina rerum :
Non aliâ longe ratione atque ipsa videtur
Protrahere ad gestum pueros infantia linguæ ;
Quom facit, ut digito, quæ sint præsentia, monstret :
Sentit enim vim quisque suam quod possit abuti.

Ver. 1034. *Broke their wild vigour, and the fond caress*
Of prattling children——] Nothing can possibly exhibit a more delicate touch than the whole of this admirable painting, from ver. 1027, while the couplet in question is equal, in chastity of delineation, to any part of it. The version of Creech is indelicate in the first idea it conveys, and totally incorrect in the second :

And lust enfeebled him ; besides the child,
Softened by parent's love, grew tame and mild.

Lucretius says, the parent became softened by the blandishments of his children ; and not the children by those of the parent.

Ver. 1037. ——*and resolv'd*
The softer sex to cherish, and their babes ;] In the original, ver. 1020 :

Et pueros conmendarunt, muliebreque seclum.

In the true spirit of French gallantry, thus interpreted by the baron de Coutures : " Ils etablirent

Their frames so melted they no more could bear,
As erst, th' uncover'd skies; the nuptial bed
Broke their wild vigour, and the fond caress
Of prattling children from the bosom chac'd
Their stern ferocious manners. Neighbours now
Join'd in the bonds of friendship, and resolv'd
The softer sex to cherish, and their babes;
And own'd by gestures, signs, and sounds uncouth,
'Twas just the weaklier to protect from harm.
Yet all such bonds obey'd not; but the good,
The larger part their faith still uncorrupt
Kept, or the race of man had long expir'd,
Nor sire to son transferr'd the life receiv'd.
Then nature, next, the tongue's innumerous tones
Urg'd them to try; and sage convenience soon
To things applied them: as the embryo speech
Of infants first the aid of gesture claims,
And pointing finger to define its sense.
For all their proper powers perceive, and feel

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l'education des enfans; et firent connoître par des gestes et des voix peu articulées qu'il faloit soûtenir le beau sexe."

Ver. 1045. *Then nature, next, the tongue's innumerous tones*] The whole of the ensuing dogma yet exists in Diogenes Laertius, as the precise tenet of Epicurus, lib. x. 75. Αλλα μην ὑπολητπτιον και την φυσιν πολλα και παντοια ὑπο των αυτην πιριστωντων πραγματων διδαχθηκαι τι, και αναγκασθηναι'—ἰδιν και τα ονοματα ἰξ αρχης μη θισιι γινισθαι, αλλ' αυτας τας φυσιι των ανθρωπων, καθ' ἑκαστα ἐθνη ἰδια πασχουσας παθη, και ἰδια λαμβανουσας φαντασματα, ἰδιως τον αιρα ἐκπιμπιν, στιλλομινοι ὑφ' ἑκαστων των παθων και των φαντασματων, ὡς αν ποτι και ἡ παρα τους τοπους των ἐθνων διαφορα ῃ. The explanation in the poem itself renders all other interpretation unnecessary.

Cornua nata prius vitulo quam frontibus exstent,
Illis iratus petit, atque infestus inurguet:
At catulei pantherarum, scymneique leonum,
Unguibus, ac pedibus jam tum morsuque repugnant,
Vix etiam quom sunt dentes unguesque createi.
Alitum proporro genus alis omne videmus
Fidere, et a pennis tremulum petere auxiliatum.
Proinde, putare aliquem tum nomina distribuisse
Rebus, et inde homines didicisse vocabula prima,

Ver. 1051. ——*The young calf, whose horns*
Ne'er yet have sprouted,——] Not dissimilar to the delineation of Horace:

Cras donaberis *hædo*,
Cui *frons turgida cornibus*
Primis et venerem, et *prælia* destinat.
Od. III. xiii. 3.

A kid to-morrow shall be thine,
Whose front with sprouting horns inflated,
For war and Venus seems to pine.

Ver. 1058. *But to maintain that one devis'd alone*
Terms for all nature,——] Pythagoras, and Plato after him, contended that speech was a *science* determined upon, and inculcated in an early period of the world by one, or, at least, by a few superior persons acting in concert, and inducing the multitude around them to adopt their vocal and arbitrary signs. For it seems to have been generally agreed upon by the different schools of philosophy, that on the first origin of man language was not known: and that, according to the representation of Horace,

Cum prorepserunt primis animalia terris,
Mutum et turpe pecus:——
Donec verba, quibus voces sensusque notarent,
Nominaque invenêre. Sat. i. 3.

When first from earth the ranks of mortals burst,
A dumb, dull herd appear'd they; till at length
Words they conceiv'd, and names by which to mark
Their meanings, and ideas.

This opinion of Pythagoras and Plato our poet justly controverts, by observing, that, without the possession of speech, it would have been absolutely impossible for any one man to have acquired a systematic knowledge of vocal science: and even if he could have done this, that it would have been equally impossible to have communicated his ideas of this science in express lectures to the multitude. Our poet accounts for the origin of systematic speech much more philosophically, and perfectly in unison with the modern theories of Buffon, lord Monboddo, and Mr. H. Tooke. Animals of every class and description, he observes, have a natural language of their own; or, in other words, they have a power of expressing definite sensations by definite tones: mankind, therefore, on their earliest creation, must have been possest of a species of natural language in common with animals in general. Of what this language consisted, it is idle to seek for explanation in the present day: like the natural language of all other animals, it must, however, have been very confined, very imperfect, and hence very much accompanied and assisted by particular gesticulations. But formed as man is, with organs of articulation better adapted for vocal sounds than those of any other animal

The use intended. The young calf, whose horns
Ne'er yet have sprouted, with his naked front
Butts when enrag'd: the lion-whelp or pard
With claws and teeth contends, ere teeth or claws
Scarce spring conspicuous: while the pinion'd tribes
Trust to their wings, and, from th' expanded down
Draw, when first fledg'd, a tremulous defence.
But to maintain that one devis'd alone
Terms for all nature, and th' incipient tongue

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whatever; and possessed of an infinitely larger proportion of reason and intelligence, which must necessarily demand an infinitely greater variety of vocal sounds than are requisite for the purposes of other animals, it is not to be supposed that he would confine himself to the few uncouth tones of which he was naturally possest, but would exercise his superior faculty of articulation in the formation and utterance of tones unexpressed before, and frequently derived from the sounds or noises observable in nature—a class of words denominated by the French philosophers, *onomatapies*—in which the sound, literally, becomes "an echo to the sense:"—and would gradually appropriate, as in the case of the natural language of animals, particular tones to particular ideas; every man, perhaps, in the primæval community, adding a little to the common stock, till systematic speech at length arose, and natural language gave way to artificial.

Artificial language originating in this manner, must necessarily, moreover, but gradually, upon the separation of a community into distinct and distant colonies, divaricate into a multiplicity of colonial or national tongues. For new ideas must necessarily beget new tones, and the same tone, uncontrolled by the precision of letters, must frequently differ in its mode of enunciation, till at length the original tone be totally forsaken, and another gradually usurp its place. Of the different colonies, again, that ramify from the common stock, some will be more active and industrious, and others more indolent and inert; and while the former add largely to the original vocabulary, the latter will be gradually losing the recollection of a variety of its most general terms, and be relapsing into a language as meagre and barren as the first rude efforts of artificial speech. Hence the diversity of languages into which the world is at present divided; which, numerous as they are, exhibit proofs of a common origin, and may even yet be reduced into five or six genera. Hence the cause of the poverty and barbarism of some languages, and the suavity and richness of others: and hence the absurdity and impracticability of the expectation of Leibnitz, Kant, and many other philosophers, of some future universal language, or a language to be adopted by all nations. Were such a language, at this moment in actual existence,—in less than a century, from indolence and hence forgetfulness in some, from a fondness for variety in others, and the birth of new ideas, and consequently new terms among several other nations, this universal language would diverge into a multiplicity of dialects, which, in a still longer period of time, would scarcely exhibit any similarity of the same family features. Commerce, occasional intercourse, and the knowledge of letters would, doubtless, contribute something towards the preservation of its uniformity,

Desipere est: nam quur hic posset cuncta notare
Vocibus, et varios sonitus emittere linguæ,
Tempore eodem aliei facere id non quisse putentur?
Præterea, si non aliei quoque vocibus usei
Inter se fuerant, unde insita notities est?
Utilitas etiam, unde data est huic prima potestas,
Quid vellet facere, ut sciret, animoque videret?
Cogere item plureis unus, victosque domare,
Non poterat, rerum ut perdiscere nomina vellent:
Nec ratione docere ullâ, suadereque surdis,
Quid sit opus facto; faciles neque enim paterentur:
Nec ratione ullâ sibi ferrent amplius aureis
Vocis inauditos sonitus obtundere frustra.
Postremo, quid in hac mirabile tanto opere est re,
Si genus humanum, cui vox, et lingua, vigeret,
Pro vario sensu varias res voce notaret;
Quom pecudes mutæ, quom denique secla ferarum,

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and check the deviations to which it must necessarily submit: but no power or agreement of man would be altogether sufficient. Greece though, in its whole extent, not much larger than Yorkshire, could never acquire the unity here sought after. Italy, France, and England, in modern times, have all their provincial variations; and large as is the intercourse between our own country and the American states, and appealing, as both do, to the same classical authorities, the American language has already admitted a variety of terms which are totally unknown to ourselves, while it seems to have discharged no inconsiderable number of those which are still used in colloquial English.

" On demande," observes M. De Lille upon this very subject, in a note of high merit in the Preliminary Discourse to his Translation of Virgil's Georgics, p. 30. " comment les hommes, qui ont eu la même origine, ont pu parler différent langues? mais on devrait demander plutôt, comment il a été possible qu'une grande quantité d'hommes parlât la même langue? En effet, il se trouve une si grande différence dans la conformation de nos organs, la combinaison des sons est si variée, si infinie, qu'il est bien étrange qu'une multitude d'êtres se soit réunie constamment à articuler de la même façon une même suite de sons, pour exprimer une certaine suite d'idées, qui aurait pu être exprimée tout aussi

Taught to the gazers round him, is to rave.
For how should he this latent power possess
Of naming all things, and inventing speech,
If never mortal felt the same besides?
And, if none else had e'er adopted sounds,
Whence sprang the knowledge of their use? or how
Could this first linguist to the crowds around
Teach what he mean'd? his sole unaided arm
Could ne'er o'erpower them, and compel to learn
The vocal science, nor could aught avail
Of eloquence or wisdom: nor with ease
Would the vain babbler have been long allow'd
To pour his noisy jargon o'er their ears.
But why so wond'rous seems it that mankind,
With voice and tongue endow'd, to notice things
That voice should vary with the things themselves,
When the mute herds, and beasts ferocious, urg'd

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facilement par une foule infinie d'autres combinaisons.

"Les hommes concentrés dans un même canton, ont pu, par la force d'une habitude continuelle, surmonter les obstacles que la nature, et la foule des hazards mettaient à l'identité de leur langage; mais, dès qu'ils se sont séparés, la nature a repris ses droits, le langage s'est altéré insensiblement, et ces altérations ont augmenté de génération en génération au point que le premier peuple n'a plus entendu la langue du second. Une colonie de Normands, sur la fin du siècle dernier alla s'établir sur les côtes de Saint-Domingue, et forma les Flibustiers, et les Boucaniers. Etant restés vingt ans sans avoir de relations avec les Français, quelqu'ils communiquassent entre eux, la langue qu'ils avoit tous apprise et parlée dès leur enfance, se trouva tellement denaturée, qu'il n'était plus guère possible de les entendre."

Ver. 1076. *When the mute herds, and beasts ferocious, urg'd*

By grief, or fear, or rage,] The language of man, as I have already observed, is the language of artifice: but there is a language of nature common to all animals; and it is upon this natural language that the artificial language of man

Dissimileis soleant voces variasque ciere,
Quom metus, aut dolor, est; et quom jam gaudia gliscunt?
Quippe et enim licet in rebus cognoscere apertis.
Inritata canum quom primum magna Molossûm

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erected. There can be no doubt that it exists among fishes; for, since the discoveries of professor Camper, as I have already observed, it has been repeatedly demonstrated that almost every species possesses the organs of hearing, while the medium in which they live is not repugnant to the propagation of sound. Our knowledge of their accustomed habits, however, from their residence in a different element, is so comparatively small, that we have no positive facts to reason from upon this subject. But with respect to quadrupeds, reptiles, and insects, we can speak from the full evidence of daily experience. Almost every animal of these three orders exhibits a different tone of voice, according to the governing passion of the moment; but nothing can be more accurate than the division of their language here adopted by our poet into the three grand sections of *grief*, *fear*, and *joy*: to which, in some instances, we may add the classification of *anger*; but a distinct tone for anger is not so generally traced among animals as it is for the three passions enumerated in the text.

Among quadrupeds, the elephant, the horse, and the dog, appear to possess the greatest portion of natural speech. They are all gregarious, particularly the two former. In Asia, the wild elephant, and in the Ukraine, between the Don and the Nieper, the wild horse, pursue one common plan of political society in numerous and collected troops, and are regulated by magistrates chosen by themselves out of their own bodies. By a difference of voice, combined with a difference of gesticulation, these magistrates or captains give orders, in the course of their travels from place to place in pursuit of pasture, for the necessary dispositions and arrangements. They are extremely vigilant and active, and maintain their ranks and brigades with as much regularity and precision as if they were conducted by man. Among the wild horses of the Ukraine, the captain-general is commonly appointed to his station for about four or five years; at the expiration of which time, a kind of new election takes place: every one appears to have a right to propose himself for the office, the ex-commandant not excepted: if no new candidate offer, the latter is re-elected for the same term of time; and if he be opposed, a combat succeeds, and the victor is appointed commander in chief. The conduct pursued by the peaceable and amiable elephant varies in some degree from this of the wild horse: for the troops of the former are led on by the eldest, the young and the feeble marching in the middle, and the rear being composed of the adult and vigorous. See Buffon, Hist. Natur. and Description de l'Ukraine, par M. Beauplau.

The natural language of the ourang-outang, and of all the different species of apes and monkeys, although they have nearly the same organs of speech as mankind, appears to be more confined than that of many other quadrupeds, and we have no proof of their having ever attempted artificial language. Linnéus, indeed, asserts the contrary, with respect to the ourang-outang, and assures us, that he speaks with a kind of hissing voice: but this is pointedly denied by Buffon, and certainly rests upon no authenticated fact. At all adventures, he has a peculiar deficiency of natural speech; and we hence obtain an insuperable objection to the declaration of Monboddo and Linnéus, that they are all of the same species with man, and that man himself is not unfrequently to be met with in some of the Asiatic islands with a monkey tail, varying in length from three or four inches to a foot, possessed of as great a fluency of speech as in any part of Europe. The only instance of continued narration reported concerning the monkey-class, is among the tribe of American monkeys denominated occarines, or preachers. Margraave, in his History of Brasil, assures us that he has often been a personal

By grief, or fear, or soft, emollient joy,
Press from their lungs sounds various and unlike?
This every hour displays. When half-enrag'd
The rude Molossian mastiff, her keen teeth 1080

witness to the assemblage of large groups of these, both morning and evening, in the woods; when one of them selected for the purpose, after he had assumed a more elevated situation, made a signal with his hand for the rest to be quiet, and began an oration so loud and rapid as to be heard at a considerable distance. Having ceased, his auditory all reply at the same time, and continue to do so, till, by another signal, he again commands silence, resumes his harangue, appears to sum up what has been said, and to deliver the general opinion; after which, the assembly breaks up, and every one separates himself to whatever pursuit he chuses. If this be a fact, of which there is much doubt, it is natural to suppose that the oration and debate are strictly political, and relate to some common object, as well as the best means of prosecuting it with success.

The different accents of the dog and the horse, when under the influence of the passion of love, and several others, equally as powerful, are accurately noticed by our zoological poet. The amorous cry of the elephant is so peculiar that it can never be mistaken; and one of the most common modes of ensnaring this animal when wild, is by instructing a tame female to make use of it for this purpose. A pit-fall, or inclosure, is prepared in a proper place: she is led to its vicinity, begins the deceitful tale, and is soon replied to by the first male elephant within hearing; who not only replies, but approaches her, and in his approach is conducted to the snare, and taken prisoner.

The language of the tyger, leopard, and cat, is not so rich, or diversified, as that of the dog; but they have a considerable variation in the scale of their mewings, according to the predominant passion of fear or grief: while these again differ from the accent of simple pleasure, which consists in purring, and very considerably indeed from the loud and disgusting voice of love.

The language of birds is, in almost every instance, peculiarly musical, whatever be the passion it convey: to its variety in the different tribes of the osprey, hawk, sea-gull, rook, and raven, our poet is bearing testimony in verses that immediately follow. But the vocabulary of the cock and hen is the most extensive of any with which we are acquainted; or, perhaps, this idea merely proceeds from our being more intimately acquainted with this fowl than with any other. The cock has his watch-word for announcing the morning, his love-speech, and his terms of defiance. The voice of the hen, when she informs her paramour that she is disburdened of an egg, is different from that which acquaints him that the brood is just hatched; and both, again, are widely different from the loud and rapid cries with which she undauntedly assails the enemy who would rob her of her young. Even the little chick, when not more than four or five days old, exhibits a harsher and less melodious clucking when offered for food what it dislikes, than when it perceives what it relishes.

The subject is highly tempting, but I have already pursued it too far. From the birds of the fields to the grasshopper, from the bee to the fly, every attentive naturalist observes, in every tribe, a vast compass of accentuation, and comprehends the meaning of a great variety of their tones. But what is the little that we understand to what is understood by themselves, formed with similar organs, in a thousand instances infinitely more acute than our own, actuated by similar wants, and proposing to themselves similar pursuits?

Ver. 1080.] *The rude* Molossian *mastiff,*——] Molossia was a country of Epirus, so denominated from Molossus, the son of Pyrrhus, King of Epirus, and Andromache, the widow of Hector of Troy.

Mollia ricta fremunt, duros nudantia denteis,
Longe alio sonitu rabies districta minatur,
Et quom jam latrant, et vocibus omnia conplent.
At catulos blande quom linguâ lambere tentant,
Aut ubi eos lactant pedibus, morsuque potentes,
Subspensis teneros imitantur dentibus haustus,
Longe alio pacto gannitu vocis adulant,
Et quom desertei baubantur in ædibus, aut quom
Plorantes fugiunt, submisso corpore, plagas.

Denique, non hinnitus item differre videtur,
Inter equas ubi equus florenti ætate juvencus
Pinnigeri sævit calcaribus ictus Amoris;
Et quom sic alias, concussis artubus, hinnit,
Et fremitum patulis sub naribus edit ad arma?
Postremo, genus alituum, variæque volucres,
Adcipitres, atque ossifragæ mergeique, marinis
Fluctibus, in salso victum vitamque petentes,
Longe alias alio jaciunt in tempore voces,
Et quom de victu certant, prædâque repugnant.

Molossia was celebrated for its breed of mastiffs, as Sparta was for its hounds. Hence, Virgil:

Nec tibi cura canum fuerit postrema: sed una
Veloces Spartæ catulos, acremque Molossum
Pasce sero pingui:

Georg. iii. 404.

Nor slight thy dogs, on whey the mastiffs feed,
Molossian race, and hounds of Spartan breed.

Sotheby.

Ver. 1088. ——*the din*
Urg'd clam'rous through the mansion——]

Thus Gray, with still more minuteness of description:

Baring tremendous, with far different tone
Threats, than when rous'd to madness more extreme,
Or when she barks, and fills the world with roar.
Thus when her fearless whelps, too, she with tongue
Lambent caresses, and with antic paw,
And tooth restrain'd, pretending still to bite,
Gambols, soft yelping tones of tender love—
Far differ then those accents from the din
Urg'd clam'rous through the mansion when alone,
Or the shrill howl her trembling bosom heaves
When, with slunk form, she waits th' impending blow.
Neighs not the steed, too, different when, at large,
Mid the young mares, in life's luxuriant prime,
Pierc'd by the goads of pinion'd love, he raves,—
And when his full-blown nostrils snort for war,
And every quiv'ring limb the tumult hails?
So, too, the feathery tribes of wing diverse,
Osprey, or hawk, or cliff-delighted gull
Gathering its vital nurture from the deep,
Far different sounds at different times protrude
Than when they strive, in hostile guise, for prey.

Him the Dog of Darkness spied,
His shaggy throat he opened wide;
Hoarse he bays with hideous din,
Eyes that glow, and fangs that grin.
DESCENT of ODIN.

Ver. 1056. *And every quiv'ring limb*——] Thus powerfully described by M. Rosset:

S'il entend la trompette, ou les cris de la guerre,
Il s'agite, il bondit, son pied frappe la terre;
Son fier hennissement appelle les dangers;
Dans ses yeux le feu brille, il part de ses naseaux;
Son oreille se dresse, et ses crins se hérissent;
Sa bouche est ecumante, et ses membres frémissent. AGRICULTURA, Chant. V.

Et partim mutant cum tempestatibus unâ
Raucisonos cantus; cornicum secla vetusta,
Corvorumque greges; ubi aquam dicuntur, et imbreis,

Ver. 1103. ——*the social rook,*] The love of society in this bird is known almost to a proverb. Hence Virgil, Geo. i. 381: "agmine magno Corvorum exercitus." The whole passage is so exquisitely beautiful, as a picture of natural history, and so extremely in point with the immediate observation of our poet, that I shall take the liberty of transcribing it:

——nunquam imprudentibus imber
Obfuit——
——e pastu decedens agmine magno
Corvorum increpuit densis exercitus alis.
Jam varias pelagi volucres, et quæ Asiæ circum
Dulcibus in stagnis rimantur prata Cäystri,
Certatim largos humeris infundere rores;
Nunc caput objectare fretis, nunc currere in undas,
Et studio incassum videas gestire lavandi.
Tum cornix plena pluviam vocat improba voce,
Et sola in sicca secum spatiatur arena.

Sure warnings still the stormy showers precede.—
——on rustling pinions loud
The crows (*rooks*) a numerous host! from pasture homewards crowd.
Lo! various sea-fowl, and each bird that breeds
In Asian lakes, near sweet Cäyster's meads,
O'er their smooth shoulders strive the stream to fling,
And wash in wanton sport each snowy wing;
Now dive, now run upon the wat'ry plain,
And long to lave their downy plumes in vain;
Loudly the rains the boding rook demands,
And solitary stalks across the scorching sands.
Warton.

Thomson has well imitated this passage:

Retiring from the downs, where, all day long,
They pick'd their scanty fare, a blackening train
Of clamorous rooks thick-urge their weary flight,
And seek the closing shelter of the grove.
Assiduous, in his bower, the wailing owl
Plies his sad song. The cormorant, on high,
Wheels from the deep, and screams along the land.
Loud shrieks the soaring hern; and, with wild wing,
The circling sea-fowl cleave the flaky clouds.
Seasons, iv. 139.

According to Mr. Pennant, the elegant bird of Paradise, which is confined to the Papuan islands, and that of New Guinea, exhibits a similar variation of language. "When they are surprized with a strong gale," says he, "they instantly soar to a higher region, beyond the reach of the tempest: there they float at ease, in the serene sky, on their light flowing feathers, or pursue their journey in security. During their flight, they cry like starlings, but, in the distress of a storm blowing in their rear, they express it by a note resembling the croaking of ravens." Outlines of the Globe, vol. iv.

Ver. 1104. *And time-triumphant raven,*——] The longevity of this bird did not escape the knowledge of our accurate and poetic naturalist. At all times, and in all countries, the raven has been celebrated for its length of existence; and Buffon tells us, that many have been known, in different parts of France, to enter into their second century. The duration of the goose is, however, equal to that of the raven. Mr. Willoughby, in his Ornithology, tells us, that he has been assured, by the most attentive observers of this bird, that it will live upwards of an hundred years; and he relates one instance, for the truth of which he can vouch, of a goose at fourscore years of age, in the possession of the fullest health and vigour, having been designedly killed, "for her mischievousness in worrying and destroying the young geese and goslings." But the longevity of the swan is most remarkable, if the assertion be true: it is said, and said by authors of respectability, that this bird will at times protract its existence to not less than three centuries: the life of man himself, however, does not ex-

E'en with the seasons some, as fame reports,
Change their hoarse accents, as the social rook,
And time-triumphant raven, when for showers,
Or limpid rills they croak; or, sultry, pant,

able him to determine on this circumstance with much precision. A very considerable portion of longevity is also attributed to the eagle; and Mr. Pennant mentions one instance of his being possest of a most remarkable power of sustaining a long abstinence from food; having, through the neglect of servants, endured hunger for twenty-one days, without any kind of nutriment whatever. But the toad, perhaps, furnishes us with examples of both these powers, in a degree superior to that of any other animal. When tamed, and subject to daily inspection, it is observed to be possessed of a great length of years, concerning which a curious fact is related by Mr. Arscott, in a letter to Mr. Pennant. But it is well known to have been frequently found alive, and in full health, in the very centre of old full grown oaks and solid rocks, exactly filling the cavity in which it lodged, and without any visible means of acquiring food of any description. Yet the frog appears to rival the toad in longevity, and perhaps even to exceed it, if we may credit many accounts published concerning this reptile. One of the most extraordinary that I recollect, occurs in a History of the American State of Vermont, by Ira Allen, esq.—West, 1798. "Near the river Onion," observes this gentleman, "about three miles from Burlington-bay, in digging a well at the depth of twenty-four feet, wood was found, and about thirty frogs were discovered, but so apparently petrified, that it was difficult to distinguish them from so many small stones. When brought out of the well, disengaged from the earth, and exposed to the air, they gradually felt the vivifying beams of the sun, and, to the surprize of all present, leaped away with as much animation as if they had never lain in their subterraneous prison. The place where this well was sunk was on high ground, often surrounded by the river in flood times; large pines, and the ancient fragments of them, are found on this land. From the appearance of the growth of this timber, those frogs, we may well suppose, to have remained under ground six hundred years." But, entertaining as the subject is, it would occupy too much time to pursue it from birds to reptiles, and from reptiles to quadrupeds and fishes. I will only remark, that there is the strongest resemblance, with respect to brevity and longevity of life, between animals and vegetables, and that every possible variation is to be found in different classes of both kingdoms. There are insects, whose whole course of existence comprises but a few hours; there are others, again, which propagate their kind, and die in a single season. Beetles, and several species of flies, exist for two years. The dormouse lives six; the hare, seven or eight; the bear, between twenty and thirty; the camel, forty or fifty; the rhinoceros, seventy or eighty; the raven, as I have already observed, and several species of fishes, as the carp, for example, a hundred, or a hundred and fifty; the elephant, two hundred. The same progressive duration takes place among vegetables. The whole existence of some plants is confined to a few weeks, and perhaps days. Most of the esculent kinds are annual: others, as the wild-carrot, the parsnip, the fox-glove, are biennial: others, again, exist three, five, seven, ten, twenty, thirty, sixty, and a hundred years: while the oak, like the elephant, and several kinds of the larger fishes, continues to flourish for several centuries.

Ver. 1104. —— *sultry, pant.*]

Or limpid rills they croak; or, sultry, pant.] This variation of accent in the rook and the raven, in different temperatures of the atmosphere, is likewise confirmed by Pliny, Buffon, and Linnæus. Virgil, however, has not only remarked the variation in the case of the rook, but in the following verses has attempted to describe it:

Poscere, et interdum ventos, aurasque, vocare.
Ergo, si variei sensus animalia cogunt,
Muta tamen quom sint, varias emittere voces ;
Quanto mortaleis magis æquum est tum potuisse
Dissimileis aliâ, atque aliâ, res voce notare ?
Illud in hiis rebus tacitus ne forte requiras,
Fulmen detulit in terram mortalibus ignem
Primitus ; inde omnis flammarum diditur ardor :
Multa videmus enim, cœlestibus insita flammis,
Fulgere, quom cœli donavit plaga vapores.
Et ramosa tamen quom, ventis pulsa, vacillans
Æstuat, in ramos incumbens arboris, arbor,
Exprimitur, validis extritus viribus, ignis :
Emicat interdum flammaï fervidus ardor,

Tum liquidas corvi presso ter gutture voces
Aut quater ingeminant——
Verum, ubi tempestas et cœli mobilis humor
Mutavêre vias ;—
Vertuntur species animorum, et pectora motus
Nunc alios, alios, dum nubila ventus agebat,
Concipiunt, hinc ille avium concentus in agris,
Et lætæ pecudes, et ovantes gutture corvi.
Georg. i. 410.

Then, with strain'd throat, their clearest tones the rooks
Thrice pour or four times. Let the storm but change,
The changeful ether, and the vital tribes
Change, too, their instincts, and as drives the wind
The fleeting cloudlets, new sensations feel.
Hence the sweet concord of the birds, the bleat
Of joyous kine, the rook's triumphant song.

It is probable, however, that both these poets have been indebted to Aratus, if we may judge from the following passage :

Πολλακι λιμναιαι η ειναλιαι ορνιθες
Απλητον κλυζουται ενιεμεναι υδατεσσιν.—
Και κορακες μουνοι μεν, ερεμαιοι βοωοντες
Δισσακις, αυταρ επειτα μεταθροα κεκληγοντες.
Πλειοτεροι δ' αγεληδον επην κοιτοιο μεδωνται,
Φωνης εμπλειοι, χαιρειν κε τις πισσοιτο,
Οια τα μιν, βοοωσι, λιγαινομενοισιν ομοια.
Πολλα δε δενδρειοιο περι φλοον αλλοτ' επ' αυτον,
Ηχι τε κειουσιν και υποτροποι απτερυονται.
Phænom.

Then oft the sea-fowl, or the fen's wild brood
Plunge in the tide insatiate, and its waves
Wide splash around them. Lonely sit the rooks,
Twice croaking shrill ; but, after, with full throat
Tumultuous clam'ring, while the neighbouring flock
Join the loud strain, and tell the heavens their joy.

Beneath the dog-star, for the fresh'ning breeze.
Since then such various feelings can compel
Kinds the most mute such various sounds t' eject,
How just ensues it that the race of man
Should things diverse by countless tones denote?
If through such subjects thou would'st farther pry,
Know, then, that fire from thunder earliest sprang,
Each flame hence gender'd. For full many a scene
Work'd into blaze, th' etherial flash beneath,
See we the moment the dread shock is dealt.
Oft see we, too, when, waving in the winds,
Trees war with trees, the repercussion fierce
'Twixt branch and branch, stupendous, heat evolve,

Meantime, through all its tribes the world of song
Catches the rapture, and to rushy brink,
Rude, thorny thicket, or umbrageous grove,
With wings relax'd, returning, shout their chant.

In the case of the raven, Beattie alludes to his peculiar accentuation when expecting a tempest, in the following spirited lines:

The raven *croaks forlorn* on naked spray—
And, hark! the river bursting every bound,
Down the vale thunders. MINSTREL, i. 24.

Ver. 1112. *Know, then, that fire from thunder earliest sprang,*] That the first idea of culinary fire was derived from this meteor we have at least the testimony of Diodorus Siculus, i. 13. and Vitruvius ii. 1. But Lucretius to this cause adjoins another, from which it was perhaps occasionally obtained at first, and that is the attrition, in a hot atmosphere, of the sere branches of trees against each other, when repeatedly and violently driven together by a strong wind. Milton copies our poet with little alteration, and represents Adam as deriving his knowledge of culinary fire from a similar source; he is addressing himself to Eve on the setting of the sun, and meditating with her

——how we his gathered beams
Reflected, may with matter sere foment,
Or by collision of two bodies grind
The air attrite to fire; as late the clouds
Justling, or push'd with winds, rude in their shock,
Tine the slant lightning, whose thwart flame driven down
Kindles the gummy bark of fir or pine,
And sends a comfortable heat from far,
Which might supply the sun.
PAR. LOST, x. 1072.

Mutua dum inter se ramei, stirpesque, teruntur:
Quorum utrumque dedisse potest mortalibus ignem.
Inde cibum coquere, ac flammæ mollire vapore,
Sol docuit; quoniam mitescere multa videbant,
Verberibus radiorum atque æstu victa, per agros.
Inque dies magis in victum vitamque priorem
Conmutare novis monstrabant rebus et igni,
Ingenio quei præstabant, et corde vigebant.

Condere cœperunt urbeis, arcemque locare
Præsidium reges ipsei sibi, perfugiumque:
Et pecudes, et agros divisere, atque dedere,
Pro facie quoiusque, et viribus, ingenioque.
Nam facies multum valuit, viresque vigebant:
Posterius res inventa est, aurumque repertum,
Quod facile et validis, et pulchris, dempsit honorem.
Divitioris enim sectam plerumque sequuntur

Ver. 1128. *Those, too, elected rulers,*——] The entire series of civilization is well described by Thomson, but the passage is too long to insert. See his Seasons, iii. 58, and fol.

Ver. 1131. ——*and on those*
Chief fam'd for beauty,—] Many nations have as much attended to the qualifications of the external person, in their choice of a chief magistrate, as they have to the virtues of the mind. Aristotle relates this to have been true of the Ethiopians, who required the combination of grace and dignity, with mental power in their rulers,—qualities which, they apprehended, assimilated mankind to their gods, and gave full token that such persons were born for the purposes of government. De Repub. i. Hence, the expression of Euripides:

Ειδος αξιαν τυραννιδος:

A visage worth a *kingdom.*

Heat oft by flame succeeded; whence, perchance,
From both mankind their primal fires deduc'd.
But from the sun first learn'd they to prepare
The cultur'd meal hot-hissing o'er the hearth.
For all the plains produc'd the genial sun
They saw subjecting, by perpetual warmth
Matur'd, and sweeten'd: whence the wiser part
First dar'd the change, and taught their wond'ring peers
The powers of coction, and the crackling blaze.
Those, too, elected rulers, now began
Towns to project, and raise the massy fort,
Heedful of distant dangers. Into shares
Their herds, and lands they sever'd; and on those
Chief fam'd for beauty, eloquence, or strength,
Allotted ampler portions: for the form
Much then avail'd, and much the potent arm.
But wealth ere long was fashion'd, gold uprose,
And half the power of strength, and beauty fled.
And still the brave, the beauteous still, too oft,

And hence the declaration of Xenophon, (in Sympos.) that "beauty is a a quality upon which nature has affixed the stamp of royalty." Even among the Romans, it was the graceful person of Heliogabalus that induced the army to select him for their emperor. Whence Dryden:

Eyes, that confess'd him born for kingly sway.

Among the Orientals, the same conduct is still evinced in a variety of instances: and hence the Persians, who are the most elegantly formed of all the different nations of Asia, [illegible] of obtaining general favour at Delhi, and among the Moors at large. In the Asiatic Register for 1800, we meet with the following passage, in a letter from Luke Scrafton, esq. "The Persians are but a small number; and on account of the fairness of their complexions, and their politeness, are favourably received at court; the gentlemen being desirous of marrying them to their daughters, that they may keep up the complexion of their

Quam lubet et fortes, et pulchro corpore cretei.
Quod, si quis verâ vitam ratione gubernat,
Divitiæ grandes homini sunt, vivere parce
Æquo animo; neque enim est umquam penuria parvi.
At claros homines voluerunt se, atque potenteis,
Ut fundamento stabili fortuna maneret,
Et placidam possent opulentei degere vitam:
Nequidquam; quoniam, ad summum subcedere honorem
Certantes, iter infestum fecere viaï:
Et tamen e summo, quasi fulmen, dejicit ictos
Invidia interdum contemptim in Tartara tetra:
Ut satius multo jam sit parere quietum,
Quam regere imperio res velle, et regna tenere.

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family: for, degenerate as the Moors are, they are proud of their origin, and as the Mogul Tartars are a fair-complexioned people, "*a man takes his rank in some measure from his colour.*"

Ver. 1137. *And still the brave, the beauteous still, too oft,*] The same lamentation is thus elegantly pursued by Anacreon, in his well known ode, beginning Χαλεπον το μη φιλησαι

Γενος ουδεν εις ερωτα
Σοφιη, ροπος πατειται.
Μονον αργυρον βλεπουσιν·
Απολοιτο πρωτος αυτος,
Ο τον αργυρον φιλησας
Δια τουτον ουκ αδελφες
Δια τουτον ου τοκηες
Πολεμοι, φονοι δι' αυτον.

Affection now has fled from earth,
Nor fire of genius, light of birth,
Nor heavenly virtue can beguile
From Beauty's cheek one favouring smile.—
Oh! never be that wretch forgiven—
Forgive him not, indignant heaven,
Whose grovelling eyes could first adore,
Whose heart could pant for sordid ore;
Since that devoted thirst began,
Man has forgot to feel for man;
The pulse of social life is dead,
And all its fonder feelings fled!
War too has sullied Nature's charms,
For gold provokes the world to arms.

Moore.

Ver. 1140. ——*in a little lie,*] See Note on Book II. 20, where a similar moral axiom has been already advanced.

Ver. 1148. *E'en on its summit fixt,*——] To the same purpose Milton:

Alike to riches bow the servile knee.
Yet truest riches, would mankind their breasts
Bend to the precept, in a little lie,
With mind well-pois'd; here want can never come.
But men will grasp at fame, will pant for power,
As here though fortune fix'd her firmest foot,
And, these once gain'd, all else were peace and joy.
Fools thus to reason! for the total path
Whoe'er attempts finds throng'd with toils and pain;
And Envy oft, like lightning, many a wretch
E'en on its summit fixt, and free from fear,
Abrupt hurls headlong into gulphs profound.
Whence safer seems it far in low estate
Peaceful to serve, than reign, and rule mankind.

——who aspires, must down as low
As high he soar'd, obnoxious first or last
To basest things.
Par. Lost, ix. 169.

And, with very great beauty, the author of an old song, cited by B. Jonson, in Every Man out of Humour:

I see how plenty surfeits oft,
And *hasty climbers oft do fall;*
I see how those, *that sit aloft*
Mishap does threaten most of all.
Some have too much, yet still they crave,
I little have, yet seek no more;
They are but poor, though much they have,
And *I am rich* with *little store.*

Ver. 1150. *Whence safer seems it far in low estate*
Peaceful to serve, than reign, and rule mankind.]

The terms are nearly the same, but the proposition is inverted in Milton:

Better to reign in hell, than serve in heaven.

This observation of Lucretius will readily recal to recollection the well-known apostrophe of king Henry IV. in his soliloquy:

——then, happy low! lie down,
Uneasy lies the head that wears a crown.

A sentiment thus beautifully paralleled, and more largely exemplified by the following verses, ascribed to the caliph Shem-Selim:

هل عائد الدهر الا من له خطر
اما ترى البحر تعلو فوقه جيف
ويستقر باقصى قعره الدرر *
اما ترى الريح اذ هبت عواصفه
فليس يقصف الا عالي الشجر *
وفي السماء نجوم ما لها عدد

Proinde, sine, in cassum defessei, sanguine sudent,
Angustum per iter luctantes ambitionis:
(Invidiâ quoniam, ceu fulmine, summa vaporant
Plerumque, et quæ sunt altis magis edita quomque)
Quandoquidem sapiunt alieno ex ore; petuntque
Res ex auditis potius, quam sensibus ipsis:
Nec magis id nunc est, neque erit mox, quam fuit ante.
Ergo, regibus obcisis, subvorsa jacebat
Pristina majestas soliorum, et sceptra superba;
Et capitis summi præclarum insigne cruentum
Sub pedibus volgi magnum lugebat honorem:
Nam cupide conculcatur nimis ante metutum.
Res itaque ad summam fæcem, turbasque, residit;
Inperium sibi quom, ac summatum, quisque petebat.
Inde magistratum partim docuere creare;
Juraque constituere, ut vellent legibus uti.

ولبس يكشف الا الشمس والقمر
احسنت ظنك بالا يام اذ حسنت
ولم تخف سوف صا ياتي به القدر*
وسا تمتك الليالي فاغترت بها
وعند صفوء الليالي يحصل الكدر*

Aims Fate not always at life's pomp and pride?
Lo! the same main that, o'er its topmost tide
Floats the vile carcase, deep beneath its flood
Hides the rich pearl, immers'd in slime and mud.
Seest thou yon raging storm? its frantic power
Wrecks the tall tree, but spares the lowly flower.
Innumm'rous are the stars of heav'n—but none
Eclipse e'er suffers, save the moon or sun.
Now Fortune shines, thou'rt lavish in her praise,
Yet lives there nought so deadly as her rays:
"A truce," she cries—and thou believ'st her true;
But, ah! what glooms the brightest nights pursue.

Ver. 1152. ——*let them their life-blood Sweat out,*——] To the same effect Ennius, as preserved by Nonius, x. 4.

Æs sonit, franguntur hastæ, terra *sudat sanguine.*
Helms clash, spears shiver, and earth *sweats with blood.*

Whom Virgil has literally followed:

But, vainly wearied, let them their life-blood
Sweat out, thus lab'ring up the tortuous steep,
O'er which, like lightning, Envy brews her storms,
Fond of high stations—since to tales they trust
Told them by others, while each sense possest
Belies the daring fiction; men not more
Thus act, nor will do, than they erst have done.
But kings, and tyrants fell, their thrones revers'd,
Their sceptres shiver'd, and the sparkling crown
That deck'd their temples, to the dust condemn'd,
Weeping its fate beneath the people's tread,
Soon rous'd to trample what too much they fear.
So to the rabble sunk, and ranks most vile,
The power supreme; in one gross scramble all
Striving for office, and superior sway.
Yet order hence re-issu'd: some, at length,
New magistracies plann'd, new laws devis'd,

Dardanium toties *sudârit sanguine* litus?
Æn. ii. 582.

Thus oft *with blood has sweated* Ilium's shores!

But neither of these passages give the precise idea inculcated by Lucretius. A much closer parallel is to be met with in St. Luke's pathetic description of our Saviour's agony, cap. xxii. 44.

"And his sweat was, as it were, great drops of blood falling down to the ground."

Klopstock has not done justice to this nervous representation. It depicts to us the sweating forth of blood from every pore. In the German bard, we are only told that blood *ran from our Saviour's face*, like the sweat of death:

Statt des todes-schweisses, vom antlitz des leidenden blut rann.

Ver. 1159. *But kings, and tyrants fell, their thrones revers'd,*
Their sceptres shiver'd,——] In the original, thus, ver. 1135.

Ergo, regibus obtritis, subversa jacebat
Pristina majestas solorum, et sceptra superba

Which Creech thus renders metaphorically.

That sun once set, a thousand little stars
Gave a dim light to jealous eyes and wars.

In the text, however, the reader will find that the remotest idea is communicated of *stars*, or *stones*, or *light*, or *wears*, or *jealousies*.

Nam genus humanum, defessum vi colere ævom,
Ex inimicitiis languebat: quo magis ipsum
Sponte suâ cecidit sub leges, artaque jura.
Acrius ex irâ quod enim se quisque parabat
Ulcisci, quam nunc concessum est legibus æquis,
Hanc ob rem est homines pertæsum vi colere ævom.
Inde metus maculat pœnarum præmia vitæ:
Circumretit enim vis, atque injuria, quemque;
Atque, unde exorta est, ad eum plerumque revortit:
Nec facile est placidam, ac pacatam, degere vitam,
Qui violat factis communia fœdera pacis.
Et si fallit enim divôm genus humanûmque,
Perpetuo tamen id fore clam diffidere debet:
Quippe ubi se multei, per somnia sæpe loquentes,
Aut morbo delirantes, protraxe ferantur;
Et, celata diu, in medium peccatum dedisse.

Ver. 1171. *Hence, easier led, spontaneous to the yoke*
Of equal rule and justice.——] Such, as De Coutures has well observed, is the origin of the social compact advanced by Plato, in his celebrated Republic, lib. 31. "Cela se raporte," says the baron, "à ce que dit Platon, que les hommes ayant eprouvé les funestes suites des outrages qu'ils avoient faits, et des ceux qu'ils avoient reçus, chercherent un remede à ces malheurs qui troubloient le repos de leur vie; de sorte qu'ils s'accorderent entr'eux d'une maniere que personne ne fût offensé, et que personne ne fit de violence: c'est delà, ajoute ce sage philosophe, que les loix prirent leur origine, et qu'on les nomma de justes preceptes."

Ver. 1176. ——*in their craftiest nets*
Oft their own sons entangle,——] In the original, thus:

Circumretit enim vis, atque injuria, quemque.

Ver. 1151.

Whence Ovid:

Fallite fallentes, ex magna parte profanum
Sunt genus; *in laqueos quos posuere cadant.*
Art. Amor. i.

Outplot the plotters: 'tis a race most vile;
Let their own snares th' accursed crew beguile.

The same idea is common, even to a proverb, in almost every language, though occasionally expressed by a different metaphor. Thus Hesiod:

Οι αυτῳ κακα τευχει ανηρ αλλῳ κακα τευχων·
Ἡ δε κακη βουλη τῳ βουλευσαντι κακιστη.
Opp. et Dies, A. 263.

And all concurr'd t' obey them: for the strife
'Twixt man and man exhausted all their strength;
Hence easier led, spontaneous, to the yoke
Of equal rule and justice. Passion oft
Rous'd them, they saw, to vengeance too severe,
Broils heap'd o'er broils the most ferocious tir'd,
And ceaseless fear marr'd all the bliss of life.
For force and rapine in their craftiest nets
Oft their own sons entangle, and the plague
Ten-fold recoils; nor can the wretch with ease
Live blest and tranquil whose atrocious soul
Bursts the dear bonds of peace and social love.
For, though from men, from gods, his guilt he hide,
Detection fears he still; since oft in dreams,
In deep deliriums oft, th' unshackl'd tongue
Tells crimes aloud for ever else conceal'd.

He works his own ill who another's works;
In his own counsel self-destruction lurks.

And thus, with equal elegance, Ps. ix. 15.

טבעו גוים בשחת עשו
ברשת זו טמנו נלכדה רגלם:

The nations have sunk into the pit they had digged;
In the snare they had laid have their own feet been entangled.

Thus, also, Psalm xxxv. 7.

For a snare without cause have they laid for me,
Without cause have they digged for me a pit.
May ruin rush upon them unawares;
May the snare catch hold of them which they themselves have laid;
Into this destruction may they plunge headlong.

Ver. 1177. ——*and the plague*
Ten fold recoils;——] Lucretius, ver. 1152.
Atque, unde exorta est, ad eum plerumque revertit.
Hence, Milton:
—— Revenge, though sweet at first,
Bitter ere long, back on itself recoils.
Par. Lost, vi. 17[illegible].

Ver. 1182. ——*and if in dreams,*
In deep deliriums oft, th' unshackl'd tongue] See upon this subject the Note on Book IV. v. 9[illegible]

Nunc, quæ caussa deûm per magnas numina genteis
Pervolgarit, et ararum conpleverit urbeis,
Subscipiendaque curarit solemnia sacra,
Quæ nunc in magnis florent sacra rebus, locisque;
Unde etiam nunc est mortalibus insitus horror,
Qui delubra deûm nova toto subscitat orbi
Terrarum, et festis cogit celebrare diebus;
Non ita difficile est rationem reddere verbis.
Quippe et enim jam tum divôm mortalia secla
Egregias animo facies vigilante videbant;
Et magis in somnis, mirando corporis auctu.
Hiis igitur sensum tribuebant propterea, quod
Membra movere videbantur, vocesque superbas
Mittere pro facie præclarâ, et viribus amplis.
Æternamque dabant vitam, quia semper eorum

Ver. 1192. *For the first mortals effigies of gods*
Oft trac'd—] To the same effect, Thomson:

This is the life——
Led by primeval ages, uncorrupt,
When angels dwelt, and God himself with man.
Autumn, 1346.

Ver. 1194. ——*and in shape*
More vast and wond'rous;——] So Juvenal, addressing the awful power of Justice:

Te *vidit* in somnis: tua sacra et MAJOR IMAGO
Humana, turbat pavidum. xiii. 221.

Amid his dreams, thy MORE THAN MORTAL MAKE
Sees he, aghast, and all his members quake.

In perfect accordance with our poet, Isaiah repeatedly describes the shades of the deified heroes of ancient times, to whom temples were erected, and divine honours paid by the heathen world, by the term רפאים, (*Rephaim*) "the *gigantic* spectres," "the *mighty*" or "*enormous* dead."

So, in that triumphant, but severe satire upon Belshazar, after his death, chap. xiv. 9.

שאול מתחת רגזה־לך
לקראת בואך:
עורר לך רפאים
כל עתודי ארץ:

The lowermost Hell is in motion for thee,
To congratulate thy arrival:

Next learn what cause, through many a mighty realm,
The system first of gods, and altars rear'd;
Whence the dread rites with solemn pomp pursu'd
When aught momentous man presumes t' attempt;
The sacred horror, whence, that, through the world,
Builds temples, statues, feasts and fasts ordains.
This to resolve the muse not arduous deems.

For the first mortals effigies of gods
Oft trac'd awake, when mus'd the mind profound,
Yet, mid their dreams, still ofter, and in shape
More vast and wond'rous; these of sense possest
Quick they conceiv'd, since mov'd they every limb,
And spoke majestic with enormous voice
Worthy their matchless make. Immortal life
Next they bestow'd, since with unvarying face,

For thee arouseth he the MIGHTY DEAD,
All the chieftains of the earth.

Thus, again, ch. xxvi. 13, 14.

יהוה אלה ינו
בעלונו אדנים זולתך
לבד בך נזכיר שמך׃
מתים בל יחיו
רפאים בל יקמו׃

O Jehovah our God!
Other lords than thou have ruled over us,
But thee, and thy name alone will we celebrate.
The dead! never shall they revive;
The *mighty dead!* never shall they arise again.

On the general doctrine of effigies, or effluvia, see Note on Book IV. 33. On the effigies and nature of superior beings, see Note on ver. 153. and 158. of the Book before us. Consistently with his common doctrine, Lucretius imputes the more frequent appearance of these heavenly semblances, or rather their being more frequently perceived by mankind in the earlier ages of the world, to the greater degree of solitude and tranquillity in which life was then passed away, prior to the birth of those innumerable desires, cares, and fears, which now too frequently harass the soul through every moment of its existence; and which, by engrossing the whole of their attention, prevent mankind from being sensible of the presence of such fine and attenuate effluvia.

Subpeditabatur facies, et forma manebat:
Et tamen omnino, quod tantis viribus auctos
Non temere ullâ vi convinci posse putabant:
Fortunisque ideo longe præstare putabant,
Quod mortis timor haud quemquam vexaret eorum;
Et simul in somnis quia multa et mira videbant
Ecficere, et nullum capere ipsos inde laborem.
Præterea, cœli rationes ordine certo
Et varia annorum cernebant tempora vorti;
Nec poterant quibus id fieret cognoscere caussis.
Ergo perfugium sibi habebant omnia divis
Tradere, et illorum nutu facere omnia flecti.
In cœloque deûm sedes et templa locarunt,
Per cœlum volvi quia nox, et luna, videtur;
Luna, dies, et nox, et noctis signa severa,
Noctivagæque faces cœli, flammæque volantes,
Nubila, sol, imbres, nix, ventei, fulmina, grando,
Et rapidei fremitus, et murmura magna minarum.

O genus infelix humanum! talia divis
Quom tribuit facta, atque iras adjunxit acerbas.

Ver. 1218. ——*that could first ascribe*
Such facts, such furies to th' immortal gods.] Frachetta, in his "Brief Exposition" of our poet, here pursues the common hue and cry, and accuses him of gross impiety. "It is from the knowledge of sensible things," says he, "that we raise ourselves to a knowledge of God." As if Lucretius were here adverting to any other religion than the popular superstitions of his day. Independently of which, however, the expositor observes, that he contradicts the opinion of *Aristotle*; than which scarcely any thing could be a greater crime: "while," adds he, "the

Unvarying form, the phantoms ever rose,
(As rise they must); and o'er such massy strength
No power, they deem'd, could triumph. Blest supreme
Then, too, they held them, since the dread of death
Such ne'er could haunt, and deeds stupendous oft
Seem'd they, in dreams, with utmost ease t' achieve.

Each various phase, moreo'er, the heavens disclose,
Each various season, punctual to its hour
They mark'd incessant; and, the cause unknown,
These to the gods, with subterfuge most prompt,
Nodding omnific, idly they referr'd.
And in the heavens their blest abodes they plac'd,
Their awful temples, since both sun and moon
Here radiant reign; sun, moon, and day, and night,
And night's dread fires, and meteors wand'ring wild,
And swift-plum'd lightnings, showers, and crystal dews,
Clouds, snows, winds, thunders, hail, and countless storms,
Through ether threatning with tremendous roar.
O hapless mortals! that could first ascribe
Such facts, such furies to th' immortal gods.

---

poet, in this place, denies the existence of the gods, though he admits of such existence elsewhere." Here, again, we find a commentator mistaking his author's meaning, and then charging him with self-contradiction. "Ma erra empiamente Lucretio, percio che dalle cose sensibile ci leviamo in cognition di Dio, e non da sogni, o da imaginationi: e *contradice ad Aristotile*, il quale dal moto de corpi celesti, passa a cotale conoscimento, appresso erra e forse contradicea a se stesso: imperoche pare che tenga che i Dei non sieno: il contrario di che *ha affermato altrove*." Brev. Sposit. in loco.

Quantos tum gemitus ipsei sibi, quantaque nobis
Volnera, quas lacrumas peperere minoribus nostris!
Nec pietas ulla est velatum sæpe videri
Vortier ad lapidem, atque omneis adcedere ad aras:
Nec procumbere humi prostratum, et pandere palmas
Ante deûm delubra, neque aras sanguine multo
Spargere quadrupedum, nec votis nectere vota;
Sed mage placatâ posse omnia mente tueri.
Nam, quom subspicimus magni cœlestia mundi
Templa super, stellisque micantibus æthera fixum;
Et venit in mentem soliis, lunæque, viarum;
Tunc, aliis obpressa malis, in pectora cura
Illa quoque expergefactum caput erigere infit:
Ne quæ forte deûm nobis inmensa potestas
Sit, vario motu quæ candida sidera vorset.
Tentat enim dubiam mentem rationis egestas:

Ver. 1222. *No:—it can ne'er be piety to turn*
To stocks and stones, &c.——] The passage, in the original, is admirably beautiful; and worthy the attention, not only of every Christian, but of every rational being. To the absurd superstitions of his own æra, Lucretius shows himself, in almost every page, to have been nobly superior: he had a mind sufficiently gifted to perceive their follies, and a heart sufficiently daring to expose those follies to the derision of his countrymen. He has been accused of irreligion and impiety; but he shows us, in these verses, what was the religion he combated, and what the piety to which he devoted himself: he fled from idols and sacrifices of blood, and habituated himself to a life of resignation and patience; making it the main business of his life,

——to mark
With calm, untrembling soul, each scene ordain'd.

Let those who, either wantonly or ignorantly, have hitherto reviled his character, recant their unfounded aspersions, and imitate the piety he recommends.

Ver. 1123. —*with deep-veil'd visage;*—] The Romans, while worshipping the images of their gods,

What myriad groans then rear'd ye for yourselves!
What wounds for us! what tears for men unborn!
No:—it can ne'er be piety to turn
To stocks and stones with deep-veil'd visage; light
O'er every altar incense; o'er the dust
Fall prostrate, and, with outstretch'd arms, invoke
Through every temple every god that reigns,
Soothe them with blood, and lavish vows on vows.
This rather thou term piety, to mark
With calm, untrembling soul each scene ordain'd.
For when we, doubtful, heaven's high arch survey,
The firm, fixt ether, star-emboss'd, and pause
O'er the sun's path, and pale, meand'ring moon,
Then superstitious cares, erewhile repress
By cares more potent, lift their hydra-head.
"What! from the gods, then, flows this power immense
"That sways, thus various, the bright host of stars?"—
(For dubious reason still the mind perturbs)

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were accustomed to draw a veil over their heads; and either to fall prostrate, or, if they continued standing, to spread out their arms before them. These ceremonies are detailed at large in Plutarch, Ἐν Ῥωμαϊκοῖς. Virgil alludes to the latter in his Æneid:

Ingemit, et duplices tendens ad sidera palmas. i. 97.
He groans, and either palm to heaven extends.

Ver. 1227. *Soothe them with blood, and lavish vows on vows.*] So Ercilla, with indignant severity:

Cubierta de laurel, vervena, y juncia
Con sangue de una victima que ofrezan
Absuelven el castigo que merezen.
Arauc. viii. 74.

With laurel, vervain, verdant rush o'erspread,
Their bloody victims to the gods they fell,
Absolving thus the vengeance *they deserve.*

Ver. 1228. *This rather thou term piety,*——] The passage is well interpreted by Marchetti:

Anzi e somma pietade il poter tutte
Mirar le cose, e con sereno ciglio,
E con placido cor.

Et quænam fuerit mundi genitalis origo ?
Et simul, et quæ sit finis, quoad mœnia mundi
Et taciti motûs hunc possint ferre laborem ?
An, divinitus æternâ donata salute,
Perpetuo possint ævi labentia tractu,
Inmensi validas ævi contemnere vireis.
Præterea, quoi non animus formidine divôm
Contrahitur ? quoi non conrepunt membra pavore,
Fulminis horribili quom plagâ torrida tellus
Contremit, et magnum percurrunt murmura cœlum ?
Non populei, gentesque, tremunt ? regesque superbei
Conripiunt divôm perculsei membra timore,
Ne quod ob admissum fede, dictumve superbe,
Pœnarum grave sit solvundi tempus ad auctum ?
Summe etiam quom vis violenti per mare venti
Induperatorem classis super æquora verrit,

Ver. 1249. *Starts not the tyrant, through each tendon starts,*
Mad with the sense of perfidies, and blood,] It is not possible to peruse this fearful delineation without being reminded of Shakspeare's celebrated speech of King Lear, in a storm described with equal energy, and with such a similarity of moral observation, as almost to tempt the idea that it could not be the mere effect of chance :

——Let the great gods,
That keep this dreadful pother o'er our heads,
Find out their enemies now.—Tremble, thou wretch,
That hast, within thee, undivulged crimes,
Unwhipp'd of justice. Hide thee, thou bloody hand!
Thou perjur'd, and thou simular of virtue,
That art incestuous! caitiff, shake to pieces,
That, under covert and convenient seeming,
Hast practis'd on man's life! Close, pent-up guilt,
Rive your concealing continents, and ask
These dreadful summoners grace.

So too in verses well worthy of the company of Lucretius and Shakspeare, Juvenal :

Hi sunt qui trepidant, et ad omnia fulgura pallent,
Cum tonat, exanimes primo quoque murmure cœli
Non quasi fortuitu, nec ventorum rabie, sed
Iratus cadat in terras, et vindicet ignis.
Illa nihil nocuit, curâ graviore timetur
Proxima tempestas : velut hoc dilata sereno.

" This wond'rous world how form'd they? to what end
" Doom'd? through what period can its lab'ring walls
" Bear the vast toil, the motions now sustain'd?
" Or have th' immortals fram'd it free from death,
" In firm, undevious course empower'd to glide
" O'er the broad ravage of eternal time?"
Then, too, what breast recoils not with the dread
Of gods like these? who, with unshudd'ring limbs,
Can view them dart o'er earth their forky flash,
And roll their deep-ton'd thunder? shrink not, then,
Whole lands, whole nations? o'er his shiv'ring throne
Starts not the tyrant, through each tendon starts,
Mad with the sense of perfidies, and blood,
And in the storm contemplating his due?—
Then faints not, too, the warlike chief who guides
His fleet o'er ocean, when, around him, roars

Præterea lateris vigili cum febre dolorem
Si cœpere pati, missum ad sua corpora morbum
Infesto credunt a numine: saxa deorum
Hæc, et tela putant. Pecudem spondere sacello
Balantem, et laribus cristam promittere galli
Non audent. Quid enim sperare nocentibus ægris
Concessum? vel quæ non digniore hostia vitâ?
xiii. 223.

These, these are they who tremble and turn pale
At the first mutterings of the hollow gale,
Who sink with terror at the transient glare
Of meteors glancing through the turbid air.
This is not chance, they cry: this hideous crash
Is not the war of winds: nor this dread flash
Th' encounter of dark clouds; but blasting fire
Charg'd at the wrath of heav'ns insulted sire.
That clap at a safe distance dies away;
Shuddering, they wait the next with more dismay,
As if the short reprieve were only sent
To add new horrors to their punishment.
Yet more: when the first symptoms of disease,
When feverish heats their restless members seize,
They think the plague by wrath divine bestow'd,
And feel, in every pang, th' avenging God.
Rack'd at the thought, in hopeless grief they lie,
And dare not tempt the mercy of the sky:
For what can such expect? what victim slay,
That is not worthier far to live than they?

Gifford.

Cum validis pariter legionibus, atque elephantis;
Non divôm pacem votis adit, ac prece quæsit
Ventorum pavidus paces, animasque secundas?
Nequidquam: quoniam, violento turbine sæpe
Conreptus, nihilo fertur minus ad vada leti.
Usque adeo res humanas VIS ABDITA quædam

Ver. 1256. *And tempts the gods with vows, and prays, aghast,*
For winds appeas'd,——] Thus, M. de Saint Lambert, admirably describing a rain and thunder-storm, in his poem of The Seasons:

La peur, l'airain sonnant dans nos temples sacrés,
Font entrer à grands flots les peuples égáres.
Grand Dieu! vois à tes pies leur foule consternée
Te demander le prix des travaux de l'année.
Hélas! d'un ciel en feu les globules glacés,
Ecrasent, en tombant, les epis renversés.
Le tonnerre et les vents déchirent les nuages;
Les ruisseaux, en torrens, dévastent leurs rivages.
O récolte! o moissons! tout périt sans retour:
L'ouvrage de l'année est détruit dans un jour.

Fear, to the brass-resounding temple drives,
Flood after flood, the crowd that scarce survives.
O God! behold them at thy feet deplore
Their ruin'd hopes, their harvests now no more.
Lo! the harsh hail-storm, from the heav'ns on fire,
Falls o'er the glebe, and roots each rustick spire.
Thunder and whirlwind rend the clouds in twain;
The delug'd streams exundate every plain.
Fruits of the fields! O treasures doubly dear,
One day destroys the bounties of a year.

This is highly spirited; and it shews how well the writer was acquainted with the Seasons of our own excellent countryman Thomson. I beg the reader to compare this passage, and much that precedes it, if he be in possession of the poem, with the Autumn of the English bard, from ver. 311 to 343.

Ver. 1260. *So, from his awful shades some* POWER UNSEEN] These verses baffle all commendation: they are equally energetic, sublime, and true. They are full of the existence of a supreme controlling power, while, with becoming modesty, they pretend not to a knowledge of his essence or qualities. To our poet he was concealed, invisible, unknown, VIS ABDITA QUÆDAM; but his effects were obvious and incontrovertible. Who of us, without presumption, can pretend to a more intimate knowledge of him in the present day?

Usque adeo res humanas VIS ABDITA QUÆDAM
Obterit; et pulcros fasces, sævasque secures,
Proculcare, ac ludibrio sibi habere, videtur.

There can be little doubt that Virgil had his eye directed to this exalted passage in the following verses:

Ipse pater, media nimborum in nocte, corusca
Fulmina molitur dextra: quo maxima motu
Terra tremit, fugere feræ, et mortalia corda
Per gentes humilis stravit pavor. GEORG. i. 328.

Great Jove himself, whom dreadful darkness shrouds,
Pavilion'd in the thickness of the clouds,
With lightning arm'd, his red right hand puts forth,
And shakes with burning bolts the solid earth:
The nations shrink appall'd; the beasts are fled;
All human hearts are sunk and pierc'd with dread.
WARTON.

This description, however, fine as it is, is far excelled, as Dr. Warton has justly observed, by the following of the Psalmist, xviii. 12. in which, after representing the Almighty as flying *upon the wings of the wind* in the midst of a storm, he adds:

The maniac whirlwind? falls he not profound
Mid his vast elephants, and victor hosts,
And tempts the gods with vows, and prays, aghast,
For winds appeas'd, and soft succeeding gales?
Yet vainly: for the wild tornado oft
Hurls him all headlong to the gates of hell.
So, from his awful shades some POWER UNSEEN

He made darkness his secret covert around him;
His pavilion dark waters, accumulated clouds.

The sacred Scriptures, both Jewish and Christian, are replete with the same imagery. I have referred to a variety of instances in the preceding Life of our poet, p. 71, 72. The following from Isaiah offers us another, and of equal force and pertinence, ch. xlv. 15.

Verily thou art a God that hidest thyself,
O God of Israel! the deliverer.

So in Matt. vi. 17. 18. "But thou, when thou fastest, anoint thy head and wash thy face; that thou appear not unto men to fast, but unto *thy father who is in secret:* and thy father, *who seeth in secret*, shall reward thee openly."

In the following verses of Hesiod there is something so truly coincident with the divine superintendance and sovereign control, as expressed in the text, but more especially with the celestial hierarchy of the Jewish and Christian system, that the reader will readily excuse my transcribing it. If the popular deities of the Greeks had been uniformly thus represented, there would have been little occasion for the interference of the Epicurean philosophy to have attempted any correction of the general creed:

Ω Βασιλεις υμεις δε καταφραζεσθε και αυτοι
Τηνδε δικην· Εγγυς γαρ ι' ανθρωποισιν ιοντες
Αθανατοι λευσσουσιν, οσοι σκολιησι δικησι
Αλληλους τρηχουσι, θεων οπιν ουκ αλεγοντες.
Τρις γαρ μυριοι εισιν επι χθονι πουλυβοτειρη
Αθανατοι Ζηνος, φυλακες θνητων ανθρωπων.

Οι ρα φυλασσουσιν τε δικας και σχετλια εργα,
Ηερα εσσαμενοι, παντη φοιτωντες επ' αιαν.

OPP. ET DIES, A. 246.

Ye too, O kings! from justice never stray:
For, watchful, stationed near mankind, the Gods
Behold their mutual contests, the foul wrongs
Oft they commit, regardless of their ire.
Thrice told, ten thousand blest immortals walk,
Guardians of man, around this goodly earth,
And mark his virtues, his transgressions mark;
Etherial-veil'd, and wand'ring at their will.

It is almost impossible to conceive that Milton had not this passage in his recollection when composing the following, which is part of an address of Adam to Eve, anterior to the fall:

Millions of spiritual creatures walk the earth
Unseen, both when we wake and when we sleep:
All these, with ceaseless praise his works behold
Both day and night: how often from the steep
Of echoing hill or thicket have we heard
Celestial voices through the midnight air,
Sole or responsive to each other's note,
Singing their great Creator? oft *in bands*
While they keep watch, or nightly walking round
With heavenly touch of instrumental sounds,
In full harmonic number join'd, their songs
Divide the night, and lift our thoughts to heav'n.

PAR. LOST, V. 677.

Obterit; et pulchros fasces, sævasque secures,
Proculcare, ac ludibrio sibi habere, videtur.

Denique, sub pedibus tellus quom tota vacillat,
Concussæque cadunt urbes, dubiæque minantur;
Quid mirum, si te temnunt mortalia secla,
Atque potestates magnas mirasque relinquunt
In rebus vireis divôm, quæ cuncta gubernent?
Quod super est, æs atque aurum ferrumque repertum est,
Et simul argenti pondus, plumbique potestas,
Ignis ubi ingenteis sylvas ardore cremarat
Montibus in magnis; seu cœli fulmine misso:
Sive quod, inter se bellum sylvestre gerentes,
Hostibus intulerant ignem, formidinis ergo;

Ver. 1270. ——*hardier copper*,——] The term *æs*, in the original, is generally interpreted in the different versions *brass*, which, as a generic substantive, it will undoubtedly include, as well as *copper*. But *brass*, the appropriate term for which is *aurichalcum*, being a compound metal, and the invention of subsequent ages, it is obvious the poet here refers to the original metal whence brass was manufactured. Marchetti employs the term *rame*, which is equally general with *æs*, and may alike be adopted to signify either copper or brass.

The existence of the metals here referred to in the interior of the earth, is thus described by Garth, in his Dispensary:

> Here, sullen to the sight, at large is spread
> The dull unwieldy mass of lumpish lead:
> There, glimmering in their dawning beds, are seen
> The more aspiring seeds of sprightly tin.
> The *copper* sparkles next in ruddy streaks,
> And in the gloom betrays its glowing cheeks:
> The silver then, with bright and burnish'd grace,
> Youth, and a blooming lustre in its face,
> To th' arms of those more yielding metals flies,
> And in the folds of their embraces lies.

On the invention and composition of brass or aurichalcum among the Greeks and Romans, see Note on Book VI. v. 1113.

Ver. 1270. ——*first were trac'd*
When, o'er the hills, some conflagration dire] The passage is thus imitated by Milton. He is describing the vision of Adam, concerning future events and discoveries:

> In other part stood one who, at the forge
> Labouring, two massy clods of iron and brass,
> Had melted, (whether found where casual fire

O'erthrows all human greatness! treads to dust
Rods, ensigns, crowns—the proudest pomps of state,
And laughs at all the mockery of man!
When, too, the total earth beneath us quakes,
And tott'ring towns loud tumble, or so threat,
What wonder men their littleness should feel,
And to the gods all power and might ascribe,
Whence rule they, ceaseless, this stupendous world?
This clear discuss'd, learn next that silver, gold,
Lead, hardier copper, iron, first were trac'd
When, o'er the hills, some conflagration dire
Burn'd from its basis the deep-rooted grove;
By lightnings haply kindled, or the craft
Of hosts contending o'er the woodland scenes,

Had wasted woods on mountain, or in vale,
Down to the veins of earth, thence gliding hot
To some cave's mouth, or whether washed by stream
From underground) the liquid ore he drain'd
Into fit moulds prepar'd. Par. Lost, xi. 564.

Mr. Wakefield has copied a longer and still more accurate imitation, from the Eva et Adamus of Marius Victor.

The conflagrations, here referred to, are still common in many of the vast and impervious forests of the Northern regions. M. Acerbi has given a particular and spirited account of those of Finland, which often originate from an unassignable cause. "I saw in this forest," says he, "the disastrous wreck of one of those conflagrations which had devoured the wood through an extent of six or seven miles, and which exhibited a most dismal spectacle. You not only saw trunks and large remains of trees lying in confusion on the ground, and reduced to the state of charcoal, but also trees standing upright, which, though they had escaped destruction, had yet been miserably scorched; others black and bending down to one side, whilst, in the midst of the ruins of trunks and branches, appeared a group of young trees, rising to replace the former generation, and full of vigour and vegetable life, seemed to be deriving their nourishment from the ashes of their parents." Travels through Sweden, Finland, and Lapland, 4to. Vol. I.

It is to this phænomenon that the Psalmist refers, in the following stanzas, lxxxiii. 14, 15.

כאש תבער יער וכ
להבה תלהט הרים׃
כ׃ תרדפם בסערך
וכסופתך תבהלם׃

As fire consumeth the forest,
And as flame setteth the mountains in a blaze,
So pursue them with thy tempest,
And terrify them with thy whirlwind!

Sive quod, inductei terræ bonitate, volebant
Pandere agros pingueis, et pascua reddere rura ;
Sive feras interficere, et ditescere prædâ :
Nam foveâ, atque igni, prius est venarier ortum,
Quam sæpire plagis saltum, canibusque ciere.

Quidquid id est, quâquomque ex caussâ flammeus ardor
Horribili sonitu sylvas exederat altis
Ab radicibus, et terram percoxerat igni ;
Manabat venis ferventibus, in loca terræ
Concava conveniens, argenti rivus, et auri ;
Æris item, et plumbi : quæ, quom concreta videbant
Posterius claro in terras splendere colore,
Tollebant, nitido captei lævique lepore ;
Et simili formata videbant esse figurâ,
Atque lacunarum fuerant vestigia quoique :

Ver. 1273. ——*or the craft*
Of hosts contending o'er the woodland scenes,] This sort of craft was by no means unfrequently resorted to, where there was a fair prospect of its being attended with advantage. It is probable, however, that our poet more immediately refers, on the present occasion, to the successful stratagem employed by Hannibal to liberate himself and his army from the hands of Fabius, who had completely blocked him up in the narrow valley of Eribanus, in the year of the city 544, the chief and most important pass of which was guarded by a detachment of four thousand picked Roman soldiers. Hannibal, after reflecting on the danger of his situation, ordered two thousand oxen to be made ready against the approach of evening, with bundles of vine-branches tied upon their horns. To these vine-branches he commanded the herdsmen to set fire in the dead of the night, and to drive the animals to the summit of the hills, on which the Romans were encamped. No sooner had they begun to feel the flames that surrounded them, than, in a state of ungovernable fury, they fled up and down the precipices in every possible direction, set fire to all the trees, bushes and shrubs that opposed them ; and

A double fear thus striking through their foes:
Or by the shepherd's wish his bounds t' enlarge
O'er tracts of specious promise; or, perchance,
Wild beasts to slaughter, and their spoils possess;
For such, with fire and guileful pit, mankind
First caught, ere hounds were marshall'd to the chace,
Or round the copse the mazy net-work drawn.—
  Whate'er the cause, when now the unctuous flame
Had from their utmost roots, with hideous crash,
Fell'd the tall trees, and, with its torrid heat,
The soil deep-redden'd, rills of liquid gold,
Lead, silver, copper, through its fervid pores
Glided amain, and every hollow fill'd.
These when, condens'd, long after men survey'd
Glistening in earth, attracted by the glare,
The splendid mass they dug; and mark'd, surpriz'd,
Each form'd alike, and, to the channell'd bed
Where late it lay, adapted most precise.

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so terrified the advanced guards of the Roman army that they quitted their posts, and hence gave the enemy an opportunity to escape.

Ver. 1285. ——*rills of liquid gold,*
Lead, silver, copper, through its fervid pores]
Hence Virgil, drinking from the same fountain:

Hæc eadem *argenti rivos, ærisque* metalla
Ostendit venis, atque auro plurima fluxit.
GEORG. ii. 165.

Here brass and silver ores rich veins expose,
And gold, still ampler, through each hollow flows.

Strabo and Aristotle concur with Lucretius in his history of the discovery of metals. The former, lib. iii. affirms, that the earliest mines of Andalusia were produced from ores reduced to fluidity, in consequence of some countrymen having accidentally set fire to the superincumbent woods, whereby the substance of the earth itself became heated, and the fluent metal ran into uniform masses; which were shortly afterwards discovered, when the same tract of country was shattered into distinct fragments by an earthquake. Aristotle asserts the same respecting the first traces of the silver mines of Spain, in his treatise περὶ Θαυμ. Ακουσ.

Tum penetrabat eos, posse hæc, liquefacta vapore,
Quam lubet in formam et faciem decurrere rerum;
Et prorsum quam vis in acuta ac tenuia posse
Mucronum duci fastigia procudendo,
Ut sibi tela parent; sylvasque et cædere possint,
Materiemque dolare, levare ac radere tigna,
Et terebrare etiam, ac pertundere, perque forare.
Nec minus argento facere hæc auroque parabant,
Quam validi primum violentis viribus æris:
Nequidquam; quoniam cedebat victa potestas,
Nec poterant pariter durum subferre laborem.
Nam fuit in pretio magis æs, aurumque jacebat
Propter inutilitatem, hebeti mucrone retusum;
Nunc jacet æs, aurum in summum subcessit honorem.

Ver. 1304. *Whence copper chief they courted, while all gold*
Neglected lay,——] Our poet is here truly correct. The metals primarily employed by man must have been found *pure*, or in *their native state*. Copper, in its *native state*, however, is less frequently to be met with than either gold or silver; consequently, in the first ages of the world, it must have possessed a superior value to these, as well on account of its greater scarcity, as its greater validity. In modern times, these, and all other metals, are principally obtained from their ores or calces: and the very reason why *native* gold and silver are more common than any other metals, *in their native form*, is their impromptitude to amalgamate with any other substance, or to be dissolved in any kind of fluid: consequently, while there is a larger proportion of gold and silver to be traced in their *native state* than of any other metal, there is an infinitely less proportion in the form of ores or crystallizations. Iron, on the contrary, which intermixes, and becomes sulphurated or oxygenated with other substances, more easily than any other metal, is scarcely ever to be found, excepting in its ore or pyrite state: *native iron* is on this account less frequent than either native gold, native silver, or native copper; and is expressly so stated to be by our poet, ver. 1319.

We may hence derive some idea of the proficiency of the ancients in the science of mineralogy. Of the extent to which it was practically pursued, we may form some judgment from an assertion of Polybius, that not less than *forty thousand* workmen were employed in the mines near Carthage; while Athenæus relates, more generally, that the miners in Attica were so numerous, as that at one time they rose in rebellion, and made themselves masters of the promontory of Sunium. It was probably on some such account that a law was passed, as we learn from Pliny, re-

Then instant deem'd they, liquified by flame,
The power were theirs each various shape t' assume,
Drawn dextrous out, of point or edge acute;
The power unrivall'd theirs each tool to frame
Art needs to fell the forest, and its trees
Mould into planks or beams; to cleave, or smooth
Pierce, hollow, scoop, whate'er the plan conceiv'd.
Nor strove they less such instruments t' obtain
From gold, or silver, than stern copper's strength.
Yet vainly: for their softer texture fail'd,
Powerless to bear the sturdy toil requir'd.
Whence copper chief they courted, while all gold
Neglected lay, too blunt, and dull for use.
Now triumphs gold while copper sinks despis'd.

specting the Vercellensian miners, by which they were not allowed to exceed the number of five thousand.

Metals, however, were by no means the sole object of persons thus employed. Their labour extended to fossils in general, and especially to the more valuable and precious earths and stones. It is impossible to peruse many parts of the *Old* Testament, but especially the Book of Revelations in the *New*, without being struck with the splendour of the descriptions which result from the number and union of the different precious stones which are so frequently referred to; and which afford us a most convincing proof of the perfection and extent of the art of the lapidary at the æras of the respective writers. To the ruby and emerald our poet has expressly referred in Book II. ver. 802. 805. of the original. But from the writings of Pliny, Theophrastus, and others, we know that there is scarcely a gem, a marble, a petrified, or even a volcanic production introduced into our modern systems of mineralogy, with which the ancients were not familiar. From their *crystallus*, rock-crystal or calcareous spar, (for the term applies to each) they manufactured many of their most curious seals: their *silex* included our agates, calcedonies, onyx, and several others; of all which they have left us specimens. Their *sarda* implied our sardonyx as well as cornelian: they had their *jaspis*, or jaspar: their *cyanus*, and *sapphirus*, or sapphire and lapis lazuli; their *pæderos*, *asteria*, *argyrodamas*, moon-stone, opal, Labradore-spar; their *amethyst*, and *hyacinth*, or garnet; their *gypsum* and *lapis specularis*, gypsum compact, and foliated. They had also their *basanos*, *basanites* (touchstone), *obsidianus lapis* (vitreous lava), *pumex* (pumice), *Hammonis cornu* (corna Ammonis), and many others. Upon which subject, the reader may further consult M. De Launy's Mineralogie des Anciens.

Sic volvunda ætas commutat tempora rerum:
Quod fuit in pretio, fit nullo denique honore;
Porro aliud subcedit, et e contemptibus exit,
Inque dies magis adpetitur, floretque repertum
Laudibus, et miro mortaleis inter honore est.
Nunc tibi, quo pacto ferri natura reperta
Sit, facile est ipsi per te cognoscere, Memmi!
Arma antiqua, manus ungues dentesque fuerunt;
Et lapides, et item, sylvarum fragmina, ramei;
Et, flamma atque ignes post quam sunt cognita primum,
Posterius ferri vis est, ærisque, reperta.
Et prior æris erat, quam ferri, cognitus usus;
Quo facilis magis est natura, et copia major.
Ære solum terræ tractabant, æreque belli

Ver. 1314. *Man's earliest arms were fingers, teeth, and nails,*] The whole passage is thus closely copied by Venusinus:

Cum prorepserunt primis animalia terris
Mutum et turpe pecus, glandem atque cubilia propter,
Unguibus et pugnis, dein *fustibus*, atque ita porro
Pugnabant armis, quæ post fabricaverat usus.
Sat. I. iii. 99.

When first from earth the race of mortals burst,
A dumb, dull herd, for lairs and acorns wild
With nails and fists first fought they;—next with clubs,
And arms posterior, such as art supplies.

Ver. 1318. *The tyrant iron, than the copper vein Less freely found,*——] Hence Ovid:

Æs erat in pretio, chalybs jam massa placebat.
Fast. IV.

The observations of our poet, upon the comparative proportion of native metals, are, as I have already observed, surprisingly accurate, and in unison with the dictates of modern chemistry. To the remarks, however, I have just offered in the Note on ver. 1304, I will add here the following, from Mr. Kirwan's Geological Essays, p. 401. "Of all metals, gold is most frequently found native. According to Bergman, it is more universally diffused than any other metal, except iron: this may be a consequence of its great divisibility and want of affinity to other substances, as oxygen, sulphurs, &c. Silver, in proportion to the quantity of it that exists, (he is speaking of *native* silver, p. 403.) is much more seldom found than gold, by reason of its affinity to sulphur: it was deposited in the same manner as gold, and its crystallization proves it was once in a dissolved state.—p. 404. In proportion to the quantity of copper in other states, *native copper is still* rather scarcer than

So rolling years the seasons change of things:
What once was valu'd loses all its worth,
And what was worthless rises in its stead,
Swells into notice daily, every hour
Blooms with new praise, and captive leads the world.
And hence how first the vig'rous iron charm'd,
Thyself, O Memmius, may'st with ease deduce.
Man's earliest arms were fingers, teeth, and nails,
And stones, and fragments from the branching woods.
Then fires and flames they join'd, detected soon;
Then copper next; and last, as latest trac'd,
The tyrant iron, than the copper vein
Less freely found, and sturdier to subdue.
Hence first with copper plough'd they; in the waves

native silver, though there is scarce any mine in which some quantity of it has not been detected: it is more frequent in Siberia than elsewhere. *Native iron is still scarcer than native copper*, as it is easily oxygenated and sulphurated. The vast masses found in Siberia and Peru seem to have been originally agglutinated by petrol, and left bare, when the surrounding earthy or stony masses either withered, or were washed off." Since the minute observations, however, of Mr. Howard and M. Vauquelin, it has been observed, by several mineralogists, that the Siberian, Bohemian, American, and almost all other masses of native iron, are possest of the precise properties of these stones, and especially in their combination with nickel: and an ingenious writer upon M. Izarn's Lithologie Atmospherique, in the Edinburgh Review, has given so full a play to his fancy as to conceive that all these specimens of iron, as well as the meteoric stones themselves, are of exotic birth, and have been equally propelled from the moon, in consequence of occasional eruptions of lunar volcanos. It must, at least, be observed, that the Siberian Tartars have still a tradition among them, that the masses of native iron traced in their own country fell from heaven.—Edinburgh Review, Vol. II. page 397.

Ver. 1320. *How first with copper plough'd they;*—— On which observation, Lambinus refers us to a parallel passage in Homer:

Copper their wealth, their [illegible]
bound,
Copper their [illegible]

Miscebant fluctus, et volnera vasta serebant,
Et pecus atque agros adimebant; nam facile ollis
Omnia cedebant armatis nuda, et inerma.
Inde minutatim processit ferreus ensis,
Vorsaque in obscenum species est falcis ahenæ,
Et ferro cœpere solum proscindere terræ;
Exæquataque sunt creperi certamina belli.
Et prius est armatum in equi conscendere costas,
Et moderarier hunc frenis, dextrâque vigere,
Quam bijugo curru belli tentare pericla.
Et bijugom prius est, quam bis conjungere binos,
Et quam falciferos armatum adscendere currus.
Inde boves Lucas, turrito corpore, tetros,
Anguimanos, belli docuerunt volnera Pœnei
Subferre, et magnas Martis turbare catervas.

Ver. 1328. *First, too, on horse-back strove the martial chief,*] The poet proceeds to inform us of the first subjugation of the horse to the superior power of man. In the earliest use of him he was mounted, and afterwards harnessed singly, doubly, and, last of all, quadruply to the war chariot, of which tremendous instrument of slaughter an account has been already given in Note on Book III. 652. The invention of the bridle, and riding on horseback, is ascribed by Sophocles to Neptune; by Lysias, the orator, to the Amazons; by Virgil, to the Lapithæ, a people of Thessaly, inhabiting the mountains of Pindus and Othrys, and who, in consequence, must have been in the immediate vicinity of the Centaurs, and perhaps constituted the same nation. This last writer also informs us, that the invention of the chariot of war is to be ascribed to Erichthonius, but whether the Phrygian or the Athenian chief of this name, he has not decided: most probably, however, to the latter; for Pliny makes a distinction between this Erichthonius and the Phrygians, and attributes the invention of the war-chariot, with a single pair, to the people of Phrygia, and that with a double pair to Erichthonius himself. Hist. Nat. vii. 56. "Bigas primum junxit Phrygum natio, quadrigas Erichthonius." The passage of Virgil, which contains this history of equestrian tactics, occurs in his Georgics, as follows:

Primus Erichthonius currus et quatuor ausus
Jungere equos, rapidisque rotis insistere victor.

Mix'd of wild warfare, dealt its deadly wounds,
And ransack'd fields, and cattle; for th' unarm'd
Soon yielded all things to the armed foe.
But, by degrees, the blade of iron gleam'd,
Triumphant rising o'er the copper tool.
With iron sole the genial soil they clove,
And with its fury tried the doubtful fray.

First, too, on horse-back strove the martial chief,
The reins his left hand guiding, and his right
Ruling the battle: then appear'd he next
Drawn by twin steeds in warlike car sublime,
Both hands in action, by the driver sped.
Then twins to twins he join'd, and to the car
Fix'd the curv'd scythe. And next the TYRIAN tribes
Taught the huge elephant, with fortress loins,
And lithe proboscis to delight in wounds,

Frœna Pelethronii Lapithæ, gyrosque dedêre,
Impositi dorso; atque equitem docuêre sub armis
Insultare solo, et gressus glomerare superbos.
iii. 113.

Bold Erichthonius first four coursers yoked,
And urg'd the chariot as the axle smoked.
The skilful Lapithæ first taught to guide
The mounted steeds, and rein their temper'd pride;
Taught under arms to prance, and wheel around,
Press their proud steps, and paw th' insulted ground.
SOTHEBY.

Ver. 1335. *Taught the huge elephant, with fortress loins,*] In the original, ver. 1301:

Inde *boves Lucas*, turrito corpore.

"Lucanian oxen or buffaloes." The application of this phraseology to elephants among the Romans, proceeded, according to Pliny, Hist. Nat. viii. 6. from their having first met with them in the battle fought against Pyrrhus at Lucanus, a town in the Milanese, now denominated Lugano, in the year of the city 472. Hence Lucilius, in a couplet yet preserved by Nonius:

Quem neque *Lucanis* oriundi *montibus tauri*
Ducere protelo validis cervicibus possent.
iv. 349.

Whom e'en the firm-back'd bulls Lucanus rears
Wild o'er his mountains, never can displace.

Sic alid ex alio peperit Discordia tristis,
Horribile humanis quod gentibus esset in armis;
Inque dies belli terroribus addidit augmen.
Tentarunt etiam tauros in munere belli,
Experteique sues sævos sunt mittere in hosteis;
Et validos Parthei præ se misere leones,
Cum doctoribus armatis, sævisque magistris,
Quei moderarier hiis possent, vinclisque tenere:
Nequidquam; quoniam, permixtâ cæde calentes,
Turbabant sævei nullo discrimine turmas,
Terrificas capitum quatientes undique cristas:
Nec poterant equites, fremitu perterrita, equorum
Pectora mulcere, et frenis convortere in hosteis.
Inritata leæ jaciebant corpora saltu
Undique, et advorsum venientibus ora petebant;
Et nec opinanteis a tergo diripiebant,
Deplexæque dabant in terram volnere victos,
Morsibus adfixæ validis, atque unguibus uncis.
Jactabantque suos taurei, pedibusque terebant;
Et latera, ac ventres, hauribant subter equorum
Cornibus, et terram minitanti mente ruebant.
Et validis socios cædebant dentibus aprei,
Tela infracta suo tinguentes sanguine sævei;

And break the hostile squadrons. Step by step
So Discord pour'd her plagues accurst o'er man,
And heighten'd daily all the woes of war.
Some too, as story tells, wild bulls and boars
Train'd to the strife, and taught to face the foe.
While the rude Parthians marshall'd, mid their ranks,
Troops of fierce lions, by their keepers led,
To chain or loose them as the combat call'd.
Yet vain th' attempt; for, madden'd by the blood
Promiscuous spilt, o'er friends and foes alike
Rush'd they voracious, shaking their dread crests;
Nor could the horseman his affrighted steed
Calm, or goad on the battle to renew.
Wide sprang the forest-tyrants, all, in front,
Instant o'erpowering; and, full oft, behind
Tumbling abrupt, the backward crowds, aghast,
Fix'd they to earth, vain-grappling,—by their paws
And teeth terrific torn alike to death.
Then, too, the boars, high toss'd th' infuriate bulls,
Or crush'd them with their hoofs; or through the steeds
Drove deep their gory horns, appall'd and faint,
Or 'gainst the ground their frantic foreheads dash'd.
While the mad boars against their owners aim'd
Their tusks remorseless, tinging with their blood
Th' unbroken darts (the broken they themselves

[In se fracta suo tinguentes sanguine tela]
Permixtasque dabant equitum, peditumque, ruinas.
Nam transvorsa feros exibant dentis ad actus
Jumenta, aut pedibus ventos erecta petebant:
Nequidquam; quoniam ab nervis subcisa videres
Concidere, atque gravi terram consternere casu.
Si quos ante domi domitos satis esse putabant,
Ecfervescere cernebant in rebus agundis,
Volneribus, clamore, fugâ, terrore, tumultu:
Nec poterant ullam partem reducere eorum;
Diffugiebat enim varium genus omne ferarum,
Ut nunc sæpe boves Lucæ, ferro male mactæ,
Diffugiunt, fera facta suis quom multa dedere.
Si fuit, ut facerent: sed vix adducor, ut ante
Non quierint animo præsentire, atque videre,
Quam commune malum fieret fedumque, futurum:
Et magis id possis factum contendere in omni,

Ver. 1360. ——*tinging with their blood*
Th' unbroken darts——] Upon which verse Bentley refers us to the following of Virgil:

Sternitur infelix Acron, et calcibus atram
Tundit humum expirans, *infractaque tela cruentat.*
Æn. x. 730.

Transpierc'd, the wretched Acron strikes the ground,
The broken darts deep-tinging from his wound.

Nevertheless, he agrees with Lambinus, in conceiving both the present and the subsequent verse in the original to be spurious, and is joined by Mr. Wakefield in the same sentiment. The verses are as follow:

Tela infracta suo tinguentes sanguine sævei;
[In se fracta suo tinguentes sanguine tela]
Ver. 1326.

Ver. 1372. ——*as frequent now*
Raves the young elephant to arms unus'd,] In the original thus:

Ut nunc sæpe boves Lucæ, ferro male mactæ,
Diffugiunt, fera facta suis quom multa dedere.
Ver. 1338.

Mr. Wakefield has sufficiently proved, that the

Ting'd with their own blood, trailing o'er the ground)
In one joint tumult slaught'ring man and horse.
And though the steed strove oft by sudden start,
Sidelong, to fly the fang, or pranc'd erect
Beating th' unsolid air, 'twas idle all,
Since, rent through many a tendon, down he sunk,
Shaking the champaign. Thus the beasts they deem'd
At home tam'd amply, mid the battle's rage,
Its wounds, its shrieks, its terrors, and its toils,
Frantic once more survey'd they, void of rule.
All, rampant, rav'd alike, as frequent now
Raves the young elephant to arms unus'd,
Trampling his keepers with tremendous crush.
Thus men, perchance, have fought; or, rather, thus
Their fights have plann'd in secret, pausing deep
O'er the dread ills such schemes were sure t' unfold.
Whence, if such wars have rag'd, 'tis safer far,

---

meaning of the phrase, *ferro male mactæ*, is "*ill accustomed*," or, "*unaccustomed to hostile weapons*." And in the Note on ver. 1335 of the present Book, it has already appeared that the phrase *boves Lucæ*, "*Lucanian oxen*," was in common use among the Romans, to signify *elephants*. Nothing can be more obvious, therefore, than the intention of our poet in this couplet: and yet, with a strange uniformity of error, many of the editors, and all the translators, excepting Marchetti, have understood the passage in the following sense, which I transcribe from the prose version of Guernier: "as when a bull, not rightly struck by the priest's sacrificing axe, breaks loose after much mischief done to all about him." De Coutures, to accommodate in a greater degree this interpretation to the general text, changes a part of the text itself, and for "male *mactæ*" reads "male *actæ*," "*led* or *unled* slain." And Marchetti, though by *boves Lucæ* he justly understands *elephants*, for "unaccustomed to hostile weapons" translates "ill-defended from:"

come converte
Mal difesi dal ferro or gli elefanti
Soglion arco fuggir, tra' suoi lasciando
Molte di lunga vestigia orrende.

In variis mundis, varià ratione creatis,
Quam certo atque uno terrarum quo lubet orbi.
Sed facere id non tam vincundi spe voluerunt,
Quam dare quod gemerent hostes, ipseique perire,
Quei numero diffidebant, armisque vacabant.

Nexilis ante fuit vestis, quam textile tegmen:
Textile post ferrum est; quia ferro tela paratur:
Nec ratione aliâ possunt tam lævia gigni,
Insilia, ac fusei; radiei, scapeique sonantes.
Et facere ante viros lanam natura coëgit,
Quam muliebre genus; nam longe præstat in arte,
Et solertius est multo, genus omne virile:
Agricolæ donec vitio vortere severei;
Ut muliebribus id manibus concedere vellent,
Atque ipsei pariter durum subferre laborem,

Ver. 1385. *The rude-stitch'd hide preceded the wove vest,*] In the original, thus:

Nexilis ante fuit vestis, quam textile tegmen.

Ver. 1349.

There can be no doubt of the poet's meaning: and the commentators and translators are all agreed. "Their garments," says Guernier, "were the skins of beasts, *pinned together with thorns*, before they had learned to weave." This is paraphrase, but it contains the true interpretation. Hence Virgil, describing the wild and barbarous dress of Achæmenides:

——Dira illuvies, immissaque barba,
Consertum tegmen spinis.

Æn. iii. 594.

Vile filth, and matted beard unshorn, a cloak
Loose stitch'd with thorns.

Marchetti has italianized the Latin word *nexilis* for the express purpose of his version:

Pria di *nessili* vesti il nudo corpo
Gli uomini si coprian, che di tessuto
Manto.

Ver. 1387. *For without this the loom had ne'er been fram'd,*] The loom is not an invention of modern times. Nor can I give a better history of its rise and progress than in the poetic numbers of Dyer:

——Pursue,
Ye sons of Albion, with unyielding heart,

Amid the various worlds through space that throng,
To leave their seat uncertain, than tow'rds earth
Specific point, or aught of world besides.
Yet must they, doubtless, have been wag'd from hope
Far less of conquest than revenge, each host
Unarm'd, unmarshall'd, and of death assur'd.
The rude-stitch'd hide preceded the wove vest,
Plann'd after iron, and with iron wrought:
For without this the loom had ne'er been fram'd,
Its shuttles, treadles, sley, and creaking beam.
Yet men first us'd the distaff, and the wheel,
Ere learn'd the female race; since males throughout
Prove prompter far, more dextrous, and expert;
Till the rough swain, at length, such labours mock'd
As sole the woman's province, sterner toils
The man's rude strength demanding, hardier arts

Your hardy labours: let the sounding loom
Mix with the melody of every vale;
The loom, that long-renown'd, wide-envied gift
Of wealthy Flandria, who the boon receiv'd
From fair Venetia; she from Grecian nymphs;
They from Phenicé, who obtained the dole
From old Ægyptus. Fleece, iii.

Ver. 1388. *Its shuttles, treadles, sley, and creaking beam.*] Not only was the mechanical instrument of the loom well known among the Greeks and Romans, but even its constituent parts do not appear to have varied much from those of modern use. It may be worth while to compare this account of our poet, contained in ver. 1352 of the original,

Insilia, ac fusci; radiei, scapique sonantes,

with Dyer's more minute delineation, in the following passage; in which the British bard represents the successful progress of the young weaver, who is ambitious of possessing this valuable piece of machinery:

First, he bespeaks a loom:
From some thick wood the carpenter selects
A slender oak, or beech of glossy trunk,
Or sapless ash: he shapes the sturdy frame,
The posts, and *treadles*, and the frame combines.
The smith with iron screws, and plated hoops,
Confirms the strong machine, and gives the bolt,
That strikes the *roll*. To these the turner's toils,
And graver's knife, the hollow *shuttle* add.
Fleece, ii.

Atque opere in duro durarent membra, manusque.
At specimen sationis, et insitionis origo,
Ipsa fuit rerum primum Natura creatrix:
Arboribus quoniam baccæ glandesque caducæ
Tempestiva dabant pullorum examina subter.
Unde etiam lubitum est stirpeis committere ramis,
Et nova defodere in terram virgulta per agros.

Inde aliam atque aliam culturam dulcis agelli
Tentabant; fructusque feros mansuescere terrâ
Cernebant indulgendo, blandeque colundo:
Inque dies magis in montem subcedere sylvas
Cogebant, infraque situm concedere cultis:
Prata, lacus, rivos, segetes, vinetaque læta,
Collibus et campis ut haberent; atque olearum
Cærula distinguens inter plaga currere posset,
Per tumulos, et convalleis, camposque, profusa.
Ut nunc esse vides vario distincta lepore
Omnia; quæ, pomis intersita dulcibus, ornant,

Ver. 1405. *Each barbarous fruitage sweeten and subdue.*] Hence Virgil:

Quare agite, ô proprios generatim discite cultus,
Agricolæ, fructusque feros mollite colendo.
Geo. ii. 35.

Learn then what arts each varying species suit,
And tame, by culturing skill, the savage fruit.
Sotheby.

Ver. 1412. *The purple realm of olives;*——] Pindar, Olymp. iii.

——γλαυ-
κοχροα κοσμον ελαιας:

The *red-ray'd world* of olives.

This passage is cited by Mr. Wakefield. Akenside gives us a nearly parallel painting, in his Pleas. of Imag.

His form to harden, nerv'd with double force.
But nature's self th' untutor'd race first taught
To sow, to graft; for acorns ripe they saw,
And purple berries, shatter'd from the trees,
Soon yield a lineage like the trees themselves.
Whence learn'd they, curious, through the stem mature
To thrust the tender slip, and o'er the soil
Plant the fresh shoots that first disorder'd sprang.
Then, too, new cultures tried they, and, with joy,
Mark'd the boon earth, by ceaseless care caress'd,
Each barbarous fruitage sweeten and subdue.
So loftier still, and loftier up the hills
Drove they the woodlands daily, broad'ning thus
The cultur'd foreground, that the sight might trace
Meads, corn-fields, rivers, lakes, and vineyards gay,
O'er hills and mountains thrown; while through the dales,
The downs, the slopes, ran lavish and distinct
The purple realm of olives; as with hues
Distinct, though various still the landscape swells
Where blooms the dulcet apple, mid the tufts

——the tender clusters grow
With purple ripeness, and invest each hill
As with the blushes of an evening sky. i. 282.

Ver. 1414. *Where blooms the dulcet apple, mid the tufts*
Of trees diverse that blend their joyous shades.]
It is highly probable, that the late T. Warton was indebted to this exquisite picture of our poet for the glowing verses that follow:

From whose tall ridge the noon-tide wanderer views
Pomona's purple realm in April's pride,
In blaze of bloom expanding wide,
And *waving groves* arrayed in Flora's richest hues. Birth-day Ode for 1790.

Arbustisque tenent felicibus obsita circum.
At liquidas avium voces imitarier ore
Ante fuit multo, quam lævia carmina cantu
Concelebrare homines possent, aureisque juvare.
Et Zephyri, cava per calamorum, sibila primum
Agresteis docuere cavas inflare cicutas.
Inde minutatim dulceis didicere querelas,
Tibia quas fundit, digitis pulsata canentum,
Avia per nemora ac sylvas saltusque reperta,
Per loca pastorum deserta, atque otia dia.
Sic unum quidquid paullatim protrahit ætas
In medium, ratioque in luminis eruit oras.
Hæc animos ollis mulcebant, atque juvabant,
Cum satiate cibi; nam tum sunt otia cordi.
Sæpe itaque inter se, prostratei in gramine molli,

Pomona's purple realm is too near a resemblance to the olearum cærula plaga, "*the purple realm of olives*," just noticed above, ver. 1412, to be the effect of mere accident. And the delineation of this variously tinctured scenery, this *blaze of bloom* running amidst a landscape of *waving groves* enriched with *hues* still different, is, altogether, in the Lucretian style.

Camoens appears to have had his eye directed in like manner to the same masterly description, in the following stanza:

Os dones que dà Pomona, ali natura
Produze differentes nos sabores,
Sem ter necessidade de cultura,
Que sem ella se dam muito melhores.
Cant. ix. 58.

Around the swelling fruits of deep'ning red
Their snowy hues the fragrant blossoms spread;
Between the bursting buds of lucid green
The apple's ripe vermillion blush is seen;
For here, each gift Pomona's hand bestows
In cultur'd garden, free, uncultur'd flows.
Mickle.

The following, from Gessner's Idyls, whether copied, or not, is too similar, and too intrinsically beautiful, to be omitted on this occasion: Hell war der himmel; nebel lag wie ein see im thal, und die höhesten hügel standen, inseln gleich, draus empor, mit ihren rauchenden hütten, und ihrem bunten herblichen schmutz, im sonnenglanz; gelb und purpurn, wenige noch grün, standen die bäume, mit reifen früchten überhangen, im schonsten gemische." Serene were the heavens; a sea of vapours enveloped the valleys through which the loftier hills arose, like islands, crowned with smoking

Of trees diverse that blend their joyous shades.
And from the liquid warblings of the birds
Learn'd they their first rude notes, ere music yet
To the rapt ear had tun'd the measur'd verse;
And Zephyr, whisp'ring through the hollow reeds,
Taught the first swains the hollow reeds to sound:
Whence woke they soon those tender-trembling tones
Which the sweet pipe, when by the fingers prest,
Pours o'er the hills, the vales, and woodlands wild,
Haunts of lone shepherds, and the rural gods.
So growing time points, ceaseless, something new,
And human skill evolves it into day.
Thus sooth'd they every care, with music, thus,
Clos'd every meal, for rests the bosom then.
And oft they threw them on the velvet grass,

---

cottages, and the many-coloured beauties of autumn, each reflecting the radiance of the sun: gold and purple, though still intermixed with green, stood the trees, overloaded with ripe fruits through every laughing branch." Der Herbstmorgen.

Ver. 1416. *And from the liquid warblings of the birds*] In the original, ver. 1378:

At liquidas avium voces——

Whence Gray, most indubitably:

And thus they speak, in soft accord,
The *liquid language of the skies.*
Ode to Music.

Ver. 1425. *So growing time points, ceaseless, something new,*
And human skill evolves it into day.] Not widely different, Virgil:

Ut varias usus meditando extunderet artes
Paulatim. Georg. i. 1

Jove willed that use, by long experience taught,
Should force out various arts by gradual thought.
Sotheby.

Ver. 1429. ——*on the velvet grass,*
Near gliding streams,——] This exquisite passage is repeated, with little variation, from Book II. 23, and following, and it fully merits the repetition in which the poet has indulged.

Few poets, in our own language, have been more fortunate in the delineation of similar scenery, than Sylvester, in his version of the "Divine Weeks and Works" of Du Bartas. In the following lines, there is a curious resemblance to the present passage of Lucretius.

To summon timely sleep, he doth not need
Æthiop's cold rush, nor drowsy poppy seed;

Propter aquæ rivum, sub ramis arboris altæ,
Non magnis opibus jocunde corpora habebant:
Præsertim, quom tempestas ridebat, et anni
Tempora pingebant viridanteis floribus herbas.
Tum joca, tum sermo, tum dulces esse cachinnei
Consuerant: agrestis enim tum musa vigebat.
Tum caput, atque humeros, plexis redimire coronis,
Floribus, et foliis, lascivia læta monebat:
Atque extra numerum procedere, membra moventeis
Duriter; et duro terram pede pellere matrem:
Unde oriebantur risus, dulcesque cachinnei;
Omnia quod nova tum magis hæc, et mira, vigebant.
Et vigilantibus hinc aderant solatia somno,
Ducere multimodis voces, et flectere cantus;

But on green carpets, thrumm'd with mossy beaver,
Fringing the round skirts of his glassy river,
The stream's mild murmur, as it gently gushes,
His healthy limbs in quiet slumber hushes.
W. i. D. 3.

Ver. 1437. ——*lascivious sport*] In the original, ver. 1399:

——lascivia læta.

The term *lascivia* is often and elegantly made use of in poetry, and particularly by Lucretius, without intending to express any impurity of action. Thus, in Book I. 260, the same epithet is applied to the sportive lamb or calf, just after its production:

——nova proles
Artubus infirmis teneras *lasciva* per herbas
Ludit

In the present version, Book I. 299:

With tottering footsteps, o'er the tender grass
Gambol their *wanton* young.

Marchetti has strictly adhered to the beauty of the text, and has even in some measure improved upon it, by a more open personification:

——allor festante
L'amorosa Lascivia incoronava
Le spalle.

Near gliding streams, by shadowy trees o'er-arch'd,
And void of costly wealth found still the means
To gladden life. But chief when genial spring
Led forth her laughing train, and the young year
Painted the meads with roseat flowers profuse—
Then mirth, and wit, and wiles, and frolic, chief,
Flow'd from the heart; for then the rustic muse
Warmest inspir'd them: then lascivious sport
Taught round their heads, their shoulders, taught to twine
Foliage, and flowers, and garlands richly dight;
To loose, innum'rous time their limbs to move,
And beat, with sturdy foot, maternal earth;
While many a smile, and many a laughter loud,
Told all was new, and wond'rous much esteem'd.
Thus wakeful liv'd they, cheating of its rest
The drowsy midnight; with the jocund dance
Mixing gay converse, madrigals, and strains

Shakspeare employs the same term, with a similar meaning, in the following passage, in Rich. III.

He capers nimbly, in a lady's chamber,
To *the lascivious pleasing of a lute.*

I cannot, in this place, forbear to cite a stanza of parallel imagery, from Dr. Darwin's exquisite Ode to May, which I have never yet seen excelled in any language:

Light Graces deck'd in flowery wreaths,
And tip-toe Joys their hands combine;
While Love the fond contagion breathes,
And, laughing, dances round thy shrine.

Botanic Garden, I. ii.

Ver. 1442. *While many a smile, and many a laughter loud,*] Thus in the original, ver. 1402:

Unde oriebantur risus, dulcesque cachinni.

On which Mr. Wakefield, with ready recollection, refers us to the amusement of the gods at the awkward but good-natured officiousness of Vulcan in the Il. A. 599.

Ἀσβέστος δ' ἄρ' ὀρτο γέλως μακάρεσσι θεοῖσιν,
Ὡς, ἴδον Ἡφαίστοιο διὰ δώματα ποιπνύοντα.

Vulcan with awkward grace his office plies,
And unextinguish'd laughter shakes the skies.

Pope.

Et supera calamos unco percurrere labro:
Unde, etiam vigiles, nunc hæc adcepta tuentur,
Et numeris servare genus didicere; neque hilo
Majore interea capiunt dulcedine fructum,
Quam sylvestre genus capiebat terrigenarum.
Nam, quod adest præsto, nisi quid cognovimus ante
Suavius, in primis placet, et pollere videtur;
Posteriorque fere melior res illa reperta
Perdit, et inmutat, sensus ad pristina quæque.
Sic odium cepit glandis; sic illa relicta
Strata cubilia sunt herbis, et frundibus aucta.
Pellis item cecidit, vestis contempta ferina;
Quam reor invidiâ tali nunc esse repertam,

Ver. 1451. *Than the rude offspring earth in woodlands bore.*] The whole passage is so beautifully imitated by Thomson that I cannot refrain from presenting it to the reader:

The first fresh dawn then wak'd the gladden'd race
Of uncorrupted man, nor blush'd to see
The sluggard sleep beneath its sacred beam.
So up they rose as vigorous as the sun,
Or to the culture of the willing glebe,
Or to the cheerful tendance of the flock.
Meantime the song went round: and dance and sport,
Wisdom, and friendly talk, successive, stole
Their hours away. While in the rosy vale
Love breath'd his infant sighs, from anguish free,
And full replete with bliss; save the sweet pain
That inly thrilling but exalts it more.
Nor yet injurious act, nor surly deed
Was known among those happy sons of heav'n,
For reason and benevolence were law.
Harmonious nature, too, look'd smiling on;
Clear shone the skies, cool'd with eternal gales,
And balmy spirit all. The youthful sun
Shot his best rays—as o'er the swelling mead
The herds and flocks commixing, play'd secure.—
Soft sigh'd the flute; the tender voice was heard,
Warbling the varied heart; the woodlands round
Applied their quire; and winds and waters flow'd
In consonance. Such were those prime of days.

Spring, I. 241.

This kind of happy life is not the mere dream of the philosopher or the poet: its type may occasionally be found in nature, and it appears to have been realized in the scenes of Yemen, or Arabia Felix. I enter not here into the geography of this delightful country, or the causes that contribute to render it, both from its natural blessings, and the manners of its mild and graceful inhabitants, the paradise of the world: those who are anxious to be informed on such subjects may consult, with great pleasure, Sir W. Jones's Essay on the Poetry of the Eastern Nations. I shall only quote, on the present occasion,

Run o'er the reeds with broad recumbent lip:
As, wakeful still, our revellers through night
Lead on their defter dance to time precise;
Yet cull not costlier sweets, with all their art,
Than the rude offspring earth in woodlands bore.
Thus what first strikes us, while ourselves as yet
Know nought superior, every charm combines,
But when aught else of ampler boast succeeds
We slight the former, every wish transferr'd.
Thus acorns soon disgusted; the coarse couch
Of herbs and leaves was banish'd, and the hides
Of savage beasts deem'd barb'rous, and uncouth.
Yet the vast envy such these first inspir'd

---

an extract from the Moallakat, by the Arabian poet Lebid. The passage commences as follows; and the translation is by Sir W. Jones. The entire piece, together with the accompanying poems, are among Pocock's MSS. at Oxford.

بل انت لا تدرسن كم من ليلة

صلات لذيذ لهو ها وندامها &c.

But ah! thou know'st not in what youthful play
Our nights, beguil'd with pleasure, swam away;
Gay songs and cheerful tales deceiv'd the time,
And circling goblets made a tuneful chime;
Sweet was the draught, and sweet the blooming maid
Who touch'd her lyre beneath the fragrant shade;
We sipp'd till morning purpled every plain;
The damsels slumber'd, but we sipp'd again;
The waking birds, that sung on every tree
Their early notes, were not so blithe as we.

Beautiful as is this description, the following from Sylvester, whose talents in this kind of portraiture I have already noticed, need not be afraid of a competition with it:

——clad in eternal green
There, all the year long, lusty May is seen
Suiting the lawns in all her pomp and pride
Of lively colours, lovely varified.
There smiles the ground, the starry flow'rs each one
There mounts the more the more they're trod upon;
There all grows toilless; or, if till'd it were,
Sweet Zephyrus is th' only husband there.
There Auster never roars, nor hail disleaves
Th' immortal grove, nor any branch bereaves.
There the straight palm-tree stoopeth in the calm
To kiss his spouse, his royal female palm;
There with soft whispers whistling all the year
The broad-leav'd plane-tree courts the [illegible]
[illegible] sheet;
The poplar woos the poplar, and the [illegible]
About the elm her tendrils arms doth twine,
The ivy 'bout the oak; there all doth prove
That there all springs, all greens, all lives in love

W. [illegible]

Ut letum insidiis, qui gessit primus, obiret:
Et tamen inter eos distractam, sanguine multo,
Disperiisse; neque in fructum convortere quisse.
Tunc igitur pelles, nunc aurum et purpura, curis
Exercent hominum vitam, belloque fatigant;
Quo magis in nobis, ut opinor, culpa resedit:
Frigus enim nudos sine pellibus excruciabat
Terrigenas; at nos nihil lædit veste carere
Purpureâ, atque auro signisque rigentibus aptâ;
Dum plebeia tamen sit, quæ defendere possit.
Ergo hominum genus in cassum, frustraque, laborat
Semper, et in curis consumit inanibus ævom:
Nimirum, quia non cognovit, quæ sit habendi
Finis, et omnino quoad crescat vera voluptas:
Idque minutatim vitam provexit in altum,
Et belli magnos conmovit funditus æstus.
At vigiles mundi magnum vorsatile templum
Sol et luna suo lustrantes lumine circum
Perdocuere homines annorum tempora vorti;

Ver. 1462. *Rent into tatters, perish'd void of use.*] I read with Mr. Wakefield, and all the acknowledged authorities, ver. 1420.

Et tamen inter eos distractam, sanguine multo,
Disperiisse; neque in fructum convortere quisse.

In the common lections it occurs thus:

Et *tandem* inter eos *distractum*, sanguine multo
Dispersisse, neque in fructum convertere quisse.

The translators have uniformly, hitherto, followed the corruption of the common editions.

Ver. 1468. ——*brocaded stiff with gold,*] In the original, ver. 1427.

——auro signisque *rigentibus* aptâ.

In the common versions, *ingentibus*, and in the Bolognian edition of Pius, *vigentibus*. For the restoration of the undoubtedly correct reading of rigen-

Their earliest wearer by the faithless crowd
Fell, and the garb, ferocious fought for still,
Rent into tatters, perish'd void of use.
Then man for skins contended: purple now
And gold for ever plunge him into war;
Far slend'rer pretext! for, such skins without,
The naked throngs had dreaded every blast:
But us no ills can menace, though depriv'd
Of purple woof brocaded stiff with gold,
While humbler vests still proffer their defence.
Yet vainly, vainly toil earth's restless tribes,
With fruitless cares corroding every hour;
Untaught the lust of wishing where to bound,
And where true pleasure ceases; rend'ring time
One joyless main, where sail they, void of helm,
Courting for ever tumults, storms, and strife.
But, through the heavens, the wakeful sun and moon
Driving, meanwhile, their radiant cars sublime,
Taught first to mortals how the seasons roll'd,

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tibus, we are indebted to the critical erudition of the late excellent J. Jortin, who sufficiently fortifies his conjecture by the following of Virgil:

——vestes, auroque ostroque *rigentes*:
Æn. xi. 72.

To which the ensuing from Thomson will serve as a translation:

——the glittering robe
Or floating loose, or *stiff with mazy gold*.
Autumn, 1240.

Ver. 1472. *Untaught the lust of wishing where to bound,*] To the same effect, Gessner, Death of Abel, i. p. 9. Ehe seine unzufriedenheit nimmen gesättigte wünsche aussendete, die unzählige bedürfniss erfanden, und sein gluk unter schimmerndes elend vergruben. "Not yet had discontent severed him with unsatisfied desires, planted within him an infinity of wants, and buried his happiness beneath a load of splendid miseries."

Et certâ ratione geri rem, atque ordine certo.
Jam validis sæptei degebant turribus ævom;
Et divisa colebatur, discretaque, tellus.
Tum mare velivolis florebat propter odores:
Auxilia, ac socios, jam pacto fœdere, habebant:
Carminibus quom res gestas cœpere poëtæ
Tradere; nec multo prius sunt elementa reperta.

Ver. 1484. ——*the types of sound just trac'd,*
Stamp'd each exploit, and told to times unborn.] Navigation is one of the earliest sciences known in the world. It must at least be coëval with the general deluge, and the construction of Noah's ark; on which subject the reader may re-consult, if he chuse it, the Notes on Book II. v. 1167. and Book III. v. 1048. As to the art of typography, or the mode of expressing ideas by arbitrary symbols, it is of much more difficult research. The knowledge of letters is asserted by many grammarians and philosophers, Pagan, Jewish, and Christian, to have been immediately communicated by the Supreme Being to mankind. But this assertion is, in the first place, mere conjecture, and secondly, incongruous with that exertion of the natural powers of man, which seems to be expected of him by his Creator, and for which such powers were unquestionably granted. Before it is contended, therefore, that the communication of either letters or language was miraculous, it is absolutely necessary to demonstrate that the faculties of the human mind are incompetent to such inventions; for, if they be competent of themselves, we may rest perfectly satisfied that the Almighty never immediately interfered to inform us of either. Throughout the whole extent of sacred history there is no instance of the performance of a miracle, when the effect to be produced was capable of being accomplished by natural means. Admitting, then, with our poet, that *written* or *visible* language, as well as *audible* or *oral*, is of human invention alone,—the next question that accosts us is, whether the alphabetic elements or characters employed by different nations have proceeded from one common stock?—and, if the affirmative be true, whether this common stock consisted of arbitrary symbols like our own, or of hieroglyphics, which are pictures or imitative representations of the natural attributes of things? On the first discovery of South America, of China, and of the Friendly Islands, the inhabitants of all these different countries were found to communicate their ideas by the latter medium; and from the accordance and high antiquity which must hence, of necessity, be acceded to it, picture-writing, or hieroglyphics, have been allowed the priority of invention by perhaps the greater number of inquirers, and especially by our learned and ingenious countryman, Mr. Astle, who has lately pursued this subject with indefatigable, and, in many respects, the most successful attention.

To myself these two modes of visibly expressing our ideas appear to have little or no connexion, and especially no such connexion as that of cause and effect. In other words, alphabetic elements do not appear to me to have flowed necessarily from hieroglyphics, or hieroglyphics from alphabetic elements. They are two distinct inventions for the same purpose, to which different nations have been led by accident: among some the first having been adopted, among others the second; while among others, again, as the Egyptians and Chinese, both have been equally employed,—and that without any mixture of the two modes whatever. On this account, also, it appears to me, contrary, indeed, to the opinion of Mr. Astle, that *arbitrary symbols*, as being by far the simplest contrivance for assisting the memory, anteceded the use of pictures or hiero-

And things rose punctual rul'd by punctual laws.
Now many a fort they rear'd, and into shares
Sever'd the cultur'd earth; the daring bark
O'er ocean now its light-wing'd canvas spread,
And state with state in social compact join'd:
While rising bards, the types of sound just trac'd,
Stamp'd each exploit, and told to times unborn.

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glyphics, which seem to imply a greater advance in civilization, and a more dextrous construction and use of tools than is necessary in the adoption of what we may naturally conceive to have constituted the earliest symbolic elements. To record any individual idea, be it what it may, and among what tribe or nation it may, the simplest mark that could be contrived, and most easily cut or indented, whether upon bark, wood, brick, or stone, is a right line: and it is probable, that this is the type or memorandum which was first adopted by the inventors of symbolic characters in every country. If the idea be to be varied, it is easy to conjecture that such inventors would vary the right line as to its position; and hence, instead of perpendicular, it would be rendered horizontal or oblique. If a third, a fourth, or a fifth idea be wanted, nothing appears so simple or so natural as to use two, three, or four lines instead of one; and to join them together in different directions. Every such mark, in the first instance, must have been a monogram, and indicated a distinct name or word; but when long afterwards it was observed, that how much soever *words* might be duplicated, and might vary in number, the *sounds* of which they are composed are but few, and admit of but little variance:—the same system, it is not unnatural to conceive, was applied to a developement of the ideas of sounds, which had before been applied to that of other kinds of ideas; and hence, if the idea of A, which, till now, had been appropriated to an entire word, phrase, or, perhaps, transaction, were represented by ∨, that of B may have been marked —; C, |; D, ⊢; E, ∧; F, ∨; G, Γ; H, H; W, in the same manner as our own, or thus ⋎, or in any similar mode.

Such, then, appears to have been the origin of all alphabetic symbols. In some, even of the oldest standard, there is also an addition of a curve or circle, into which the angles, by degrees, appear to have been softened: and into such right lines, and the occasional use of such circle or abraded angles, every alphabet, with which we are acquainted, resolves itself. From the extreme difference in the name, number, figure, order, and power of some alphabets, compared with others, and especially of the Phœnician, and its derivatives, compared with the Sanscrit, and all those which have ramified from it, as the Thibetian, Cashmirian, Bengalese, Malabarie, &c. it appears almost impossible, indeed, that they should have had one common origin. Nor is this in any respect necessary: what would indicate the use of alphabetic characters to one people might also indicate it to others; and there is, in effect, a similarity of system between all alphabets, which seems to infer a similarity, if not an unity, of invention, and to bear testimony that whatever may have been the *foundation* of the entire series in one country, was also the *foundation* of other series in other countries. These foundations may vary, indeed, in the opinion of different inquirers upon the same subject, but whatever be the basis admitted, the application and result is the same. I have thus ventured to hazard an opinion, which I believe to have been started, for the first time, by myself, although this is not the first place in which I have introduced it. There are others who regard the characters of every alphabet as having originally been representations of particular objects in nature; while another class conceive them to be merely conventional

Propterea, quid sit prius actum, respicere ætas 1445
Nostra nequit, nisi quâ ratio vestigia monstrat.
Navigia, atque agri culturas, mœnia, leges,
Arma, vias, vestes, et cætera de genere horum

with the superstitions of the ages or nations in which they were originally invented, and hence to be so many pictures of the deities they worshipped, or of the temples, altars, rites, or ceremonies connected with such worship; while a third division of inquirers, again, believes them to have derived their various forms from the clavicles and sprigs of trees, and especially of those trees which have been peculiarly appropriated to religious veneration: among which philologists I ought not to forget to rank Mr. Davies, the learned author of the Celtic Researches, whose fancy has hurried him so far back upon this subject as to conjecture that letters were known in the garden of Eden, and that the tree, from the variable ramifications of which their variable figures were produced, was the *tree of knowledge itself.*

Admitting then that in different countries different alphabets have had different inventors—the only question which remains to be resolved is, what country can lay claim to the earliest invention? This, however, is a question of mere curiosity, rather than of use, and I shall hence dwell upon it as briefly as possible. It is asserted by many, who by no means contend for the miraculous communication of literal characters by the Supreme Being, that the antediluvians were in possession of such elements; and Josephus advances so far as to say, that remains of such characters were to be seen, in his own æra, through different parts of Syria, engraven upon stone-pillars, the workmanship also of antediluvian ages. Antiq. i. 2. It is an assertion, however, which wants much confirmation, and is exposed to many doubts. It is, nevertheless, probable, that a people who had made such progress in the science of practical navigation, as to be able to build an ark, had made some progress also in the science of written or symbolic language. Yet the sacred Scriptures are totally silent upon the subject; and whether this be, or be not a fact, as also whether, if it be, the sciences were, or were not lost, by the earlier descendants of Noah, we are hence left at full liberty to conjecture for ourselves. Certain it is, that no antediluvian documents have either descended to ourselves, or are so clearly designated in the writings of any remote age which have reached us, as to enable us to form a judgment upon this subject.

The chief rivals for the honour of having first invented letters, are the Egyptians, Phœnicians, Chaldeans, Syrians, Arabians, and Indians; and, among these, the best claim seems to be established by the Phœnicians. The ancient Hebrew or Samaritan, however, are the same, or nearly so, as the old Phœnician characters, and probably gave birth to them; and the Chaldaic, in which a part of the Jewish scriptures is written, are unquestionably derived from the Samaritans:—this exchange in the alphabets of the Old Testament, from the old Hebrew or Samaritan to the Chaldaic, is supposed to have been introduced by the prophet Ezra. It is highly probable, both from tradition, and the coincidence of genuine history, that the Egyptians derived their knowledge of letters from the Chaldeans, and perhaps about the period of Abraham, by whom Josephus expressly declares that they were instructed in this science; though it is also contended by the two Egyptian historians Sanchoniatho and Manetho, that they derived it immediately from Phœnicia, through the instruction of Taut, the son of Menes, or Misor, the Misraim of holy writ, who was of Phœnician birth, being the second son of Amyn, or Ham, and who seated himself at Zoar, towards the entrance of Egypt, in the year before Christ two thousand one hundred and twenty-eight. He built Thebes, and, according to some reports, Memphis: is denominated by Herodotus and Diodorous Siculus, Eratosthenes, and, by Eusebius, Africanus. Allowing this Taut, or Hermes, to have introduced his characters, even not till ten years after the commencement of his father's reign, although he

Whence nought of earlier date, as facts precise,
Know we, alone by reason led to guess.
Thus navigation, agriculture, arms,
Laws, buildings, high-ways, drap'ry, all esteem'd

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is said to have invented them prior to his having quitted Phœnicia, we are still able to trace the existence of letters as far back as the year before Christ two thousand one hundred and seventy-eight, and, consequently, not more than a century and a half from the period of the Noachic deluge. Such is the account given by Sanchoniatho of Berytus in Egypt, the oldest prophane historian of whom, out of Hindustan, any remains have reached us. Sanchoniatho was contemporary with king Abibalus, the father of Hiram, the friend and ally of Solomon; and consequently flourished not less than one thousand and seventy-three years before Christ. It was to Abibalus that he dedicated his history of the Phœnicians, which was translated in the reign of Vespasian, by Philo of Biblus, and of which also various fragments are still preserved in Eusebius.

It is from the same common stock of symbolic elements, that the Greeks derived their alphabet, which has divaricated into a greater variety of branches than any other in the world, and has given birth to almost every existing alphabet in old or modern Europe. It is doubtful in what manner, or in what æra the Phœnician letters reached Greece, some writers attributing their introduction to the Pelasgians, who were an unsettled and wandering branch of the Phœnician family, and who, in the course of their migrations, planted colonies in Old Helas, Argolis, Arcadia, and the coast of Peloponnesus; while others maintain that they were conveyed into Greece through the medium of Egypt, or rather directly from Egypt. It is well known, however, that the letters of the Greek alphabet did not all arrive at one time. And it is hence probable, that the original alphabet, which consisted of not more than sixteen letters, was introduced by colonies of Phœnician Pelasgi; and that the rest were imported from Egypt at different periods: of these last, Palamedes is said to have had the honour of introducing the four double letters Θ, Ξ, Φ, X, about twenty years before the common date assigned to the capture of Troy; while to Simonides is generally ascribed the addition of Z, H, Ψ, Ω. Yet there are ancient Greek inscriptions of a date anterior to the age of even the former, in which several of both these latter series make their appearance—inscriptions, of which the Abbé Fourmont has given us specimens, and at the same time proved their authenticity.

The alphabetic characters of the Indian nations are uniformly, not excepting those of China, supposed, by most philologists, to have been derived from the Nagari, or Deva-Nagari, the *Divine* Nagari, as it is sometimes called; Nagara being the city in which these elements of the Sanscrit language were supposed to have been invented. Sir William Jones imagines, that even these originated from the Phœnician, through the medium of the square Chaldaic employed in most of our Hebrew books. Mr. Astle, on the contrary, believes them, as well as the Chinese monograms, to be strictly autochthonous and original. The period in which literal characters were first invented, or transported to India, we know not: the Dherma Sastra, or institutes of Menu, the oldest Sanscrit writing that has descended to us, cannot, in the estimation of Sir William Jones, be of less antiquity than between a thousand and fifteen hundred years before the birth of Christ; and consequently offers us a curious and valuable specimen of literary composition, earlier by several centuries than any thing of the kind presented to us in the history of Egypt. The poems of Calidas, the author of Sacontala, or the Fatal Ring, &c. as nearly as possible, contemporary with the present [illegible] of the

Præmia, delicias quoque vitæ funditus omneis,
Carmina, picturas, ac dædala signa, politus
Usus, et inpigræ simul experientia mentis,
Paullatim docuit pedetentim progredienteis.
Sic unum quidquid paullatim protrahit ætas
In medium, ratioque in luminis erigit oras.
Namque alid ex alio clarescere corde videbant
Artibus, ad summum donec venere cacumen.

Ver. 1490. ——*their perpetual need,*
And long experience fashion'd and refin'd.] Thus happily paralleled in the following verses of the Task:

——So slow
The growth of what is excellent, so hard
To attain perfection in this nether world.
Thus, first, necessity invented stools,
Convenience, next, suggested elbow chairs,
And luxury th' accomplish'd sopha last.
Book I.

The distich that immediately follows: "So growing time," &c. is verbally copied by our poet, from ver. 1425, of the present Book. The whole passage, from ver. 1487, is thus translated by M. Le Blanc de Guillet, elegantly, but with too much diffusion,

Useful to life, or to the bosom dear,
Song, painting, sculpture—their perpetual need,
And long experience fashion'd and refin'd.

So growing time points ceaseless something new,
And human skill evolves it into day:
And art, harmonious, ever aiding art,
All reach, at length, perfection's topmost point.

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and an apostrophe, not altogether in the manner of our poet upon any occasion:

Enfin tout nait, s'accroit, s'élève en sa saison.
Les champs sont cultivés, les ondes sont domptées,
Les murs sont raffermis, les loix sont cimentées;
On forge les metaux, on ouvre les chemins,
L'art revêt les mortels des tissus les plus fins.
O délices du Monde! ô charmes de la vie!
Naissez, Arts enchanteurs, Peinture, Poésie,
Et toi qui, si propice au besoin de mon coeur,
En un marbre vivant, me rends mon bienfaiteur;
Fruits heureux du loisir et de l'expérience
Naissez, venez, de l'homme, embellir l'existence.
Ainsi, pour nos plaisirs, le feu tardif du Temps
Vint animer les arts, échauffer les talens
Dont le génie enfin, par sa vive lumière,
Etend, à l'infini, l' immortelle carrière.

THE

NATURE OF THINGS.

BOOK THE SIXTH.

ARGUMENT.

A Panegyric on Athens as the inventress and first promoter of the useful and polite arts, and especially as the birth-place of Epicurus. Account of the different meteors of the heavens, and an explanation of their causes. Thunder, the thunder-bolt, and lightning:—various theories upon this subject. The water-spout, hurricane, and other phænomena of the same class. Vapours, clouds, rain, and their origin. The rain-bow, snow, wind, hail, frost and hoar-frost. Earthquakes, and their causes. The ocean, and why it never overflows. Origin and termination of springs and rivers. Volcanos, and their cause, instanced by that of Ætna. The Nile, its periodic flux and exundation. The averni, and other azotic excavations. A variety of curious wells, and fountains, and the causes of their respective phænomena. Magnetism, and its theory. Endemic and pestilential diseases. A minute and affecting history of the plague that depopulated Athens during the Peloponnesian war.

DE RERUM NATURA.

LIBER SEXTUS.

Primæ frugiparos fetus mortalibus ægris
Dididerunt quondam, præclaro nomine, Athenæ;

Ver. 1. Athens, *of peerless name, to savage man First taught*, &c.——] Our poet reverts, in the opening of this Book, to the subject so exquisitely expatiated upon towards the close of the last. He there traced mankind from their first rude origin to a state of social life, and followed them in their progress towards a knowledge of arts and sciences. He now bursts forth with an appropriate panegyric upon the city of Athens, in consequence of her having contributed, more than any other town whatever, to the general benefit and happiness of human-kind. She it was, he informs us, who first instructed them in agriculture, and political economy: she it was who illuminated the mind as amply as she provided for the body: and, finally, she it was who gave birth to the illustrious author of that excellent and comprehensive system of philosophy, which it is the uniform object of the Poem to explain. That the first knowledge of agriculture in Greece was derived from the Athenians, was a position universally admitted both in Greece and Rome; as it was, also, that religion and social order had their earliest origin among this extraordinary people. Thus Cicero, pro Flacc. Ab Athenis enim humanitas, doctrina, religio, fruges, jura, leges, orta, atque in omnes terras distributa putantur. "It is acknowledged, that literature, polite arts, religion, agriculture, laws, and social rights, originated in Athens, and were thence distributed over all nations." To the same effect, Diod. Sic. lib. xiii. Plin. vii. 56. Justin. lib. ii. But to whom are the Athenians indebted for their first advance towards this acquaintance with literature and polite arts? In the Note, Book V. v. 1483. I have observed, that the first knowledge of letters, and consequently the elements of all literature in Greece, were derived from Phœnicia, and probably through the medium of Egypt. Cecrops has the honour of having led the first, or one of the first colonies of this eventful country. But who this Cecrops was, or, rather, at what period he lived, is extremely doubtful. In the chronology of the Grecian annalists, we meet with two monarchs of this name, the one who is represented as the earliest king of Athens, and who existed not less than 780 years anterior to the Olympiads—and the other who did not ascend the Athenian throne till 225 years later, having been preceded by Cranaus, the direct successor of Cecrops I. Amphictyon, Erecthonius, Pandion I. and Erectheus. Independently, however, of the chronological error,

THE NATURE OF THINGS.

BOOK THE SIXTH.

ATHENS, of peerless name, to savage man
First taught the blessings of the cultur'd field,

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which obviously exists in this arrangement, it is sufficient to destroy its veracity, to point out the pretended origin of several of these princes. Amphictyon, the third in the catalogue, is generally stated to have been the son of Deucalion, the only male preserved amidst the general devastation of the deluge, and consequently can quadrate with no other person than Noah. Erectheus was a γηγενης, or Titan, produced immediately from the Earth, and Cecrops, an αυτοχθων, or Titan, who sprang up from the Earth in Attica itself, the very country in which he resided. To free this account from such chronological errors and absurdities, Sir Isaac Newton conjectured that Pandion II. who is represented as succeeding the second Cecrops, was the same with Pandion I. and Erectheus the same with Erechthonius: a conjecture that will strike off one hundred and fifteen years from the period of three hundred and fifty-nine, which includes the whole compass of the dynasty of the Athenian monarchs terminating with Codrus. Mr. Allwood attacks this chronological catalogue with a still greater freedom. From the etymology of the names of these Athenian princes, he seems to suppose, consistently, indeed, with his general theory, that scarcely any of them were real personages, but the personifications of generic names alone, by which different colonies of wandering Cushites were denominated. This, however, is using the axe with too liberal a hand. There can be no doubt that all the different provinces of Greece were either originally peopled by different colonies migrating from Egypt, in a manner somewhat similar to the tribes of wandering *gipsies*, or *Egyptians* of the present day, or that, if these provinces were peopled antecedently, they were subjugated by such foreign intruders. But I think it is highly probable, that every tribe thus wandering towards Greece, had a chief or superior, whose name is still preserved in the above list; and of whom several were contemporary, and lorded it over different districts of the same country. They were hence all and equally kings of Attica; and the Grecian annalists of future times, not knowing how to arrange, with certainty, the dates or territorial limits of their respective reigns, represented them as sovereigns of the same common state, and successors to one undivided throne. From the name of Erectheus (Erech-Theus, or Thoth, "the ark of Thoth,") Mr. Allwood farther imagines, that if such a prince or chief had ever really existed, he must have been a

Et recreaverunt vitam, legesque rogarunt;
Et primæ dederunt solatia dulcia vitæ,
Quom genuere virum, tali cum corde repertum,
Omnia veridico qui quondam ex ore profudit:
Quoius et exstincti, propter divina reperta,
Divolgata vetus jam ad cœlum gloria fertur.
Nam, quom vidit hic, ad victum quæ flagitat usus,
Omnia jam ferme mortalibus esse parata,
Et pro quo possent vitam consistere tutam;

terior to Cecrops, and the person who immediately carried into Attica the religious rites of Da-Mater and the Ark. The mere etymology of a name, however, I cannot allow to be a sufficient justification for such a departure from the general, though, in some respects, erroneous chronology. Yet the following passage in Diodorus Siculus, seems to give additional countenance to this theory, and, at the same time, strongly supports the assertion of our poet, that with respect to those countries which constituted, in the opinion of the Romans, the civilized world, Athens first taught the art and advantages of agriculture. It will also assist us with an æra for the commencement of the Athenian monarchy, collaterally demonstrate, so far as it extends, the truth of the Hebrew Scriptures, and prove that Erectheus was contemporary with the patriarch Jacob. "They assert," says the historian, Vol. I. lib. i. "that Erectheus was by birth an Egyptian, and allege the following motives for his having been made king over the Athenians. At a time when there was certainly a dreadful famine over every part of the habitable world, excepting Egypt, which was preserved by the Genius of the country, (accurately conceived by Mr. Allwood to mean the deified Nile) and when a great destruction followed, both of the fruits of the earth and of mankind; Erectheus, in as much as the Athenians and Egyptians were of the same race, conveyed a considerable quantity of corn from Egypt to Attica. On this account, the Athenians, who were deeply impressed by such an obligation, conferred the kingdom upon their benefactor. When he had received it, he taught the ceremonials, and instituted the mysteries of De-Meter at Eleusis, having brought these rites with him from Egypt.—The Athenians themselves acknowledged," continues he, "that, under the government of Erectheus, when the want of rain had consumed all the fruits of the ground, Demeter (Ceres) had herself come among them, and relieved their distress by the gift of corn."

This passage is of considerable consequence in fixing the date of the reign of this monarch: but it is so far from proving that he anticipated Cecrops, or was the earliest king of Athens, that it gives the Athenians a very high antiquity, and obviously implies that they were, at this period, in a state of considerable cultivation, had an established government, which was an elective monarchy, and, of consequence, that they must have been ruled by other princes, prior to the election of this Egyptian chief, Erectheus. It proves, moreover, that the Athenians were descendants from the Egyptians; that a bond of friendship was prevailing between the two countries, and at least allows us to suppose that many of their prior monarchs may have been immediately of Egyptian birth; and so far confirms the general truth of the royal chronology of Athens, the names of whose monarchs are all either Egyptian or Chaldaic.

His life re-modell'd, and with laws secur'd.
She, too, the soul's sweet solaces first op'd
When erst the sage she rear'd, whose boundless breast
Swell'd with all science, and whose lips promulg'd;
Rais'd, such th' applause his heavenly dictates drew,
Rais'd after death, in glory to the skies.
For when he saw with what vast ease mankind
Food, health, enjoyment, length of days obtain'd,

Ver. 5. *When erst the sage she rear'd, whose boundless breast*] For the history of Epicurus, here obviously alluded to, I refer the reader to the prefixed Life of Lucretius, as also to Note on Book I. 65, of the present poem. The origin of both agriculture and philosophy at Athens, as here contended for, is thus further corroborated by Statius, in verses peculiarly assimilating with those in the text:

——ipsos nam credere dignum
Cœlicolas, tellus quibus hospita semper *Athenæ*,
Ceu *leges*, *hominem*que *novum*, ritusque sacrorum,
*Semina*que in vacuas hinc deseendentia terras;
Sic sacrasse loco commune *animantibus ægris*
Confugium. Theb. xii. 501.

For e'en the gods themselves must Athens deem
Of immemorial polish; that mankind
New to the world, that laws, that sacred rites,
That grain here first the barren earth impress'd:
That for the weak a sanctuary here
First rose, of every birth, by joint consent.

Ver. 8. *Rais'd after death, in glory to the skies.*] In the original thus, ver. 7:

Quoius et exstincti, propter divina reperta,
Divolgata vetus jam ad cœlum gloria fertur.

De Coutures' version of this distich is highly erroneous: "In consequence," says he, "of his having triumphed over death."—En effet ses divines decouvertes *l'ayant fait triompher de la mort*, sa gloire immortelle lui a attiré des louanges sans bornes.

Creech, in his version of this passage, has stolen a conceit from Cowley, and introduced it as the language of Lucretius: but no poet is less addicted to such littlenesses:

The fame of whose inventions still surviv'd,
And rais'd an everlasting pyramid,
As high as heaven the top, as earth the basis wide.

Mr. Wakefield, upon the couplet in the text, refers us to a similar idea, in the following distich from the Odyssey:

Εἰμ' Ὀδυσεὺς Λαερτιάδης, ὃς πᾶσι δόλοισιν
Ἀνθρώποισι μέλω καὶ μου κλέος οὐρανὸν ἵκει. I. 20.

Behold, Ulysses! no ignoble name;
Earth sounds my wisdom, and high heaven my fame.

The parallel passage in Virgil is in every one's recollection:

Sum pius Æneas, raptos qui ex hoste penates
Classe veho mecum, famâ super æthera notus.
Æn. i. 378.

The good Æneas am I call'd, a name
Through heaven resounded by the trump of fame:
My household gods, from impious plunder [illegible],
Here share my fate, and o'er the main [illegible].

Ver. 11. *How wealth full at its tide,*] I prefer the text as edited by [illegible] Wakefield from the most approved copies, ver. [illegible]

Divitias homines, et honore et [illegible]
Adfluere, atque bonâ gnatorum extollere [illegible]

Divitias homines, et honore et laude potenteis,
Adfluere, atque bonâ gnatorum extollere famâ;
Nec minus esse domi quoiquam tamen anxia cordi,
Atque animi ingratis vitam vexare querelis;
Caussam, quæ infestis cogit sævire querelis,
Intellegit ibei; vitium vas ecficere ipsum,
Omniaque illius vitio conrumpier intus,
Quæ con læta foris, et conmoda, quomque venirent:
Partim, quod fluxum pertusumque esse videbat,
Ut nullâ posset ratione explerier umquam;
Partim, quod tetro quasi conspurcare sapore
Omnia cernebat, quæquomque receperat intus.
Veridicis igitur purgavit pectora dictis,
Et finem statuit turpedinis atque timoris;
Exposuitque, bonum summum, quo tendimus omnes,
Quid foret; atque viam monstravit tramite parvo,
Quâ possemus ad id recto contendere cursu:
Quidve mali foret in rebus mortalibus passim;

In the common editions, *divitias* is written *divitiis*, and *extollere* is exchanged for *excellere*. Marchetti, following the common reading, translates thus:

——esser potenti
Di richezze, e d' onor colmi, e di lode
Gli uomini, e i figli lor per fama illustri:

an interpretation which gives a far less degree of activity and spirit to the passage than it ought to possess.

Ver. 16. *Then deem'd the sage the mental vase itself Unsound throughout;*——] This metaphor is by no means uncommon in the writings of our poet: thus, Book III. 562:

——so the mind alike
Lives not alone without th' exterior frame,
Which, *like a vessel*, holds it.

And in the same Book, ver. 968:

——for if the time elapsed
Have smiled propitious, and not all its gifts
As though adventured in a leaky vase, &c.

How wealth full oft o'erflow'd them with its tide,
How honours throng'd on honours, and a race
With every virtue gifted, round them rose,
While still their hearts beat anxious, and their minds
Rag'd with complaints, vexations, and alarms,—
Then deem'd the sage the mental vase itself
Unsound throughout; despoiling, hence, the power
Of all that enter'd, useful or belov'd;
Fractur'd, perchance, or porous, and each boon
Wasting profuse the moment it arriv'd;
Or, from innate corruption, all receiv'd
Pois'ning perpetual through its total frame.
With truth-instilling precepts, hence, the soul
Purg'd he, the bounds of wishing and of fear
Pointed precise, and shew'd to mortal man
The good supreme his heart would fain possess.
He op'd its essence, he the path disclos'd
Narrow but straight that leads us where it dwells.
He, too, evinc'd what ills on life must wait;

The image, as I have observed in the Note on the first of these passages, is common to most countries, and to most poets. In the following tristich, we have an example from Milton:

Greatly instructed, I shall hence depart
Greatly in peace of thought, and have *my fill*
Of knowledge, what *this vessel can contain*.
Par. Lost, xii. 557.

Ver. 18. ——*useful or belov'd;*——] In the common editions the reading is *conlata*, or *collata* foris; which Faber proposed to exchange for *con grata*. It is to Bentley we owe the restoration adopted in the text, from the best authorities, of *con lata*.

Ver. 19. *Fractur'd, perchance, or porous, and each boon*
Wasting profuse the moment it arriv'd:—] In this part of the metaphor, Lucretius again adverts to the fable of the Danaides, or daughters of Danaus, of whom some account has been already given in the Note on Book III. 1048.

Quod flueret naturali, varieque volaret,
Seu casu, seu vi, quod sic Natura parasset;
Et quibus e portis obcurri quoique deceret:
Et genus humanum frustra plerumque probavit
Volvere curarum tristeis in pectore fluctus.
Nam, velutei puerei trepidant, atque omnia cæcis
In tenebris metuunt, sic nos in luce timemus
Interdum, nihilo quæ sunt metuunda magis, quam
Quæ puerei in tenebris pavitant, finguntque futura.
Hunc igitur terrorem animi, tenebrasque, necesse est
Non radiei solis, nec lucida tela diei,
Discutiant, sed Naturæ species, Ratioque:
Quo magis inceptum pergam pertexere dictis.

Et, quoniam docui, mundi mortalia templa
Esse, et nativo consistere corpore cœlum;
Et, quæquomque in eo fiunt, fierique necesse est,
Pleraque dissolvi; quæ restant, percipe, porro:
Quandoquidem semel insignem conscendere currum

Ver. 35. *For as the boy, when midnight veils the skies,*] This, and the seven ensuing verses, are repeated a second time, from Book II. 55. the first repetition occurring in Book III. 92. On this division of the anaphora, or iterative ornament, see Note on Book IV. ver. 1.

Ver. 40. ——*the radiant darts of day*] This is a favourite figure with our poet, but not more so than with the sacred writers. In the Note on Book II. 70, I have remarked a similar phraseology in Psalm lxiv. 3, 4. A parallel passage occurs in Ezekiel, chap. v. 16.

When I shall pour upon them the cruel *arrows* of famine,
Which shall be the destruction I shall employ to exterminate them.

Ver. 48. *The master of the gale invites to mount*] There is an extreme difficulty in ascertaining the genuine lection of the verses in the original, answering

What casual spring, from nature what uprise,
At random roaming, or by fate compell'd,
And how such ills the soul may best resist;
Nor sink, as frequent sinks the world, engulph'd
In boundless tides of turbulence and care.
For as the boy, when midnight veils the skies,
Trembles and starts at all things, so full oft
E'en in the noon men start at things as void
Of real danger as the phantoms false
By darkness conjur'd and the school-boy's dread.
A terror this the radiant darts of day
Can ne'er disperse, to Truth's pure light alone
And Wisdom yielding, intellectual suns.
Whence, with more haste, our subject we resume.
Since this vast globe, then, mortal we have prov'd
Begot, and mortal ether, and that all
Rear'd punctual from their atoms must dissolve,
Mark what remains, attentive; since once more
The master of the gale invites to mount

---

to this, and the two ensuing. In the common editions, they occur thus:

Quandoquidem semel insignem conscendere currum
Vincendi spes hortata est, atque obvia cursu
Quæ fuerant, sunt placato conversa furore.

which are thus translated by Guernier: "Since the hope of carrying the prize has encouraged me to ascend the chariot, and engage in so noble a race; and since the difficulties, that once attended the course, are removed, and the roughness of the way is made favourable and easy."

This common reading, however, differs very widely from all the manuscript copies, and is, moreover, extremely confused in itself. Vossius, in his annotations upon Catullus, page 191, proposes, for the two last lines:

Ventorum exhortat pellacia, et omnia rursum
Quæ fuerant, sunt placato conversa *favore*.

Ventorum excierat pacator, et omnia rursum,
Quæ furerent, sunt placato convorsa favore.
Cætera, quæ fieri in terris cœloque tuentur
Mortales, pavidis quom pendent mentibus, sæpe,
Et faciunt animos humileis formidine divôm,
Depressosque premunt ad terram; propterea quod
Ignorantia caussarum conferre deorum
Cogit ad inperium res, et concedere regnum;
Quorum operum caussas nullâ ratione videre
Possunt, ac fieri divino numine rentur.
Nam, bene quei didicere deos securum agere ævom,
Si tamen interea mirantur, quâ ratione
Quæque geri possint, præsertim rebus in illis,
Quæ supra caput ætheriis cernuntur in oris,
Rursus in antiquas referuntur religiones,

Faber retains the vulgar lection, but, nevertheless, admits that the manuscripts for *vincendi* exhibit *ventorum*, as proposed by Vossius, and for *cursu*, *rursum*. Lambinus, however, notwithstanding these variations, was so extremely dissatisfied with the whole triplet, as to condemn it as supposititious: and Creech, although he has preserved the common reading in his Latin edition, has suppressed the entire passage in his English version.

Not so Mr. Wakefield: with unconquerable patience he has followed Vossius in his endeavour to assimilate, as far as possible, the trifling variations, which are mostly literal, as they occur in the manuscript copies; and, by a happy conjecture, that *fuerant* was originally *furerent*, he has completely, if I mistake not, succeeded in restoring the genuine lection of the original text, and thus conferred a weighty obligation on the tribe of classical critics. With the text thus regenerated, it reads as follows, in the two last verses, the former remaining unaltered:

Ventorum excierat pacator, et omnia rursum,
Quæ *furerent*, sunt placato convorsa *favore*.

The reader will find, that I have translated from the passage thus resuscitated, and, with Vossius and Wakefield, by *currum* have understood *navem*. In Guernier, Marchetti, and all the other versions with which I am acquainted, in which this triplet has been translated at all, *currum* has been understood literally for a land-*chariot*, and not metaphorically for a *ship*. This use of it, however, by Lucretius, is confirmed by the following verse of Catullus:

Ipsa levi fecit *volitantem flamine currum*. lxiv. 9.

To the light gale the flying *car* she bends.

The daring bark majestic, and each storm
Soothes with his fost'ring favour as we sail.
This mark attentive: for whate'er in heaven,
In earth man sees mysterious, shakes his mind,
With sacred awe o'erwhelms him, and his soul
Bows to the dust; the cause of things conceal'd
Once from his vision, instant to the gods
All empire he transfers, all rule supreme,
And doubtful whence they spring, with headlong haste
Calls them the workmanship of powers divine.
For he who, justly, deems th' immortals live
Safe, and at ease, yet fluctuates in his mind
How things are sway'd; how, chiefly, those discern'd
In heaven sublime,—to superstition back
Lapses, and rears a tyrant host, and then

With a similar conversion, the term ἵπ, ἵππος (*Hip, Hippus*) originally applied to *water carriages*, was at length generally transferred to *land carriages*, and at length to *horses*.

Ver. 48. *The master of the gale invites to mount*
The daring bark majestic, and each storm, &c.] We cannot but be reminded, in perusing these verses, of some of equal elegance in Virgil, manifestly referring to them:

Tuque ades, inceptumque una decurre laborem,
O decus, o famæ merito pars maxima nostræ,
Mæcenas, pelagoque volans da vela patenti.
Geo. ii. 39.

Haste then, my better part of fame, my pride,
Do thou my course at once assist, and guide;
Do thou, Mæcenas, share with me the gale,
And o'er expanded seas unfurl the swelling sail.
Warton.

To which latter passage, again, Pope has been largely indebted for the admirable conclusion of his Essay on Man:

Come then, my friend! my genius! come along;
O! master of the poet and the song.—
Oh, while along the stream of time thy name
Expanded, flies, and gathers all its fame,
Say, shall my little bark attendant sail,
Pursue the triumph, and partake the gale?

Ver. 59. *For he who, justly, deems th' immortals live*] This, and several of the succeeding verses, are repeated from Book V. 88; to which, and the appended notes, I refer the reader.

Et dominos acreis adsciscunt, omnia posse
Quos miseris credunt; ignarei, quid queat esse,
Quid nequeat; finita potestas denique quoique
Quâ nam sit ratione, atque alte terminus hærens:
Quo magis errantes cæcâ ratione feruntur.
Quæ nisi respuis ex animo, longeque remittis
Diis indigna putare, alienaque pacis eorum;
Delibata deûm per te tibi numina sancta
Sæpe oberunt: non, quo violari summa deûm vis
Possit, ut ex irâ pœnas petere inbibat acreis;
Sed, quia tute tibi, placidâ cum pace quietus,
Constitues magnos irarum volvere fluctus;
Nec delubra deûm placido cum pectore adibis:

Ver. 75. ——*but that thou thyself*
Hence thy own ease wilt shipwreck with the storms] It is plausibly conjectured, by several critics, that our poet, in this passage, had his eye directed to the following, of Homer:

Ω ποποι, οἱον δη νυ Θεους βροτοι αιτιοωνται·
Εξ ἡμεων γαρ φασι κακ' εμμεναι, οἱ δε και αυτοι
Σφῃσιν ατασθαλιῃσιν ὑπερ μοῖρον αλγε' εχουσιν.
Odyss. A. 32.

Perverse mankind! whose wills, created free,
Charge all their woes on absolute decree;
All to the dooming gods their guilt translate,
And follies are miscalled the crimes of fate. Pope.

Ver. 78. *With hallow'd heart, the temples they possess,*
Nor, deeply-musing, mark with soul serene] On the nature of the immortals, or superior order of beings, here referred to, I have had frequent opportunities of animadverting before, as well as on their visibility to man in situations of extreme solitude and abstraction of mind. See Book IV. 33. Book V. 153. 158. 1198. These retired and profound meditations, which may be considered as a kind of celestial intercourse, were much practised, and, as appears in the verses before us, as well as in many others, were strongly inculcated by Epicurus and his disciples. They conceived, that, by thus withdrawing from the world, and musing on such superior intelligences, they acquired some portion of their purity and beatitude. And they certainly hereby learned, as may naturally be conceived, to subdue their passions, to repress every selfish idea, to increase their philanthropy,

Conceives, dull reas'ner, they can all things do,
While yet himself nor knows what may be done,
Nor what may never, nature powers defin'd
Stamping on all, and bounds that none can pass:
Hence wide, and wider errs he as he walks.
These notions if thou chace not, driving far
Thoughts of the gods unworthy, and adverse
To the pure peace they covet, thou wilt oft
Foretaste the heavenly vengeance that thou dread'st.
Not that the majesty of powers like these
Rage e'er can violate, or dire revenge
Rouse into action; but that thou thyself
Hence thy own ease wilt shipwreck with the storms
Of passions fierce, and foul; nor e'er approach
With hallow'd heart, the temples they possess,
Nor, deeply musing, mark with soul serene

---

and, as our poet has expressed it on another occasion, Book V. ver. 1228:

——to mark
With calm, untrembling soul, each scene ordain'd.

The temples here referred to cannot, therefore, be considered as those mechanically erected to the gods of the people, but as the vast concavity or temple of the sky itself.

The passage was well understood by Marchetti, and is hence well translated:

Nè con placido cor visiterai
I *templi* degli dei; nè con tranquilla
Pace d' alma potrai di santo corpo
L' immagin adorar, che in varie guise
Son nunzie all' nom della Divina forma.

Not widely different, for both had the idea of a concavity appropriated to religious purposes, while they employ the same term *metaphorically*, the following, of St. Paul, 1 Corinth. vi. 19. "What! know ye not, that your *body* is the *temple* of the Holy Ghost?" To the same precise effect Filicaja:

Ond' io bagnai per tenerezza il ciglio,
E nel *tempio del cuor* sacrai suo detto, &c.
Son. xxxv.

We are also naturally reminded of the sublime close of Pope's Universal Prayer: as also of a passage of equal sublimity in Thomson's truly devout Hymn:

Nature, attend! join every living soul
Beneath the spacious *temple of the sky*:
In adoration join.

Nec, de corpore quæ sancto simulacra fuerunt,
In menteis hominum divinæ nuntia formæ,
Subscipere hæc animi tranquillâ pace valebis.
Inde videre licet, qualis jam vita sequatur;
Quam quidem ut a nobis ratio verissima longe
Rejiciat, quamquam sunt a me multa profecta,
Multa tamen restant, et sunt ornanda politis
Versibus; et ratio superûm, cœlique, tenenda;
Sunt tempestates, et fulmina clara canenda;
Quid faciant, et quâ de caussâ quomque ferantur;
Ne trepides, cœli divisis partibus amens,
Unde volans ignis pervenerit, aut in utram se
Vorterit hinc partim; quo pacto per loca sæpta

Ver. 79. *Nor, deeply musing, mark with soul serene*
The sacred semblances their forms emit,] Thus Thomson again:

Oh bear me to some vast embowering shades,
To twilight groves, and visionary vales;
To weeping grottos, and prophetic glooms,
Where angel-forms athwart the solemn dusk
Tremendous sweep, or seem to sweep along.
Autumn, 1028.

Ver. 88. ——*lest, mid the rending skies,*
Fear-struck, thou ask whence flows this winged fire?] The ignorance and superstition of the multitude, both in Greece and Rome, rendered them perpetual slaves of the most idle and unfounded terrors. And though persecution was never very generally exercised against the philosophers, yet Socrates fell a victim to his opinions, Protagoras was banished, and Anaxagoras imprisoned. It was this ignorance and superstition that induced them to regard every meteor in the heavens as a good or evil omen, not dependent upon natural causes, but purposely and specially introduced by the gods themselves. Plutarch, in his "Life of Pericles," who, to his everlasting credit, exerted every effort to liberate Anaxagoras from his confinement, and was at length fortunate enough to succeed, informs us of the immense advantages this renowned chief obtained by his acquaintance with the philosopher. "He freed his mind," says he, "from all superstition, which strikes a terror into those who are ignorant of the causes of the celestial meteors, and tremble at the phænomena of the heavens; a terror which the knowledge of natural causes eradicates; and which, instead of this gloomy and perpetual consternation, inspires a solid and peaceful religion, and adds to it the blessing of a good hope."

It is against these popular prejudices, superstitions, and disquietudes, our poet is now directing his attention: and a more worthy object could not possibly have occupied his mind. Having traced the origin of the world, the creation of animals and ve-

The sacred semblances their forms emit,
Trac'd by the spirit, thus of gods assur'd.
Judge, then, thyself what life must hence ensue.
Such life the wisdom we propound rejects:
Whence, though already much the muse has sung,
Much still remains that claims her noblest powers;
Much of the heavens, and scenes that roll sublime,
Of storms, and thunders—what their dread effect,
And how produc'd: lest, mid the rending skies,
Fear-struck, thou ask whence flows this winged fire?
Where speeds its fury? by what means empower'd
To pierce through walls, and then triumphant die?

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getables, the common elements of their different frames, and the laws by which they are governed, he now proceeds to the consideration of a variety of extraordinary appearances both in the heavens and on the earth, which, at first sight, seem to deviate from the general design of nature. His observations commence with the former.

Ver. 89. ——*whence flows this winged fire? Where speeds its fury?*——] The omen of lightning, like the flight of birds, was believed by the people, and expressly declared by the perplexed and juggling pages of divination, to be auspicious or adverse, according to the quarter of the heavens from which it proceeded, or towards which it directed its course. Thus Virgil:

Sæpe malum hoc nobis, si mens non læva fuisset,
De cœlo tactas memini prædicere quercus:
Sæpe sinistra cavâ prædixit ab ilice cornix.
Ecl. i. 16.

For, had I not been blind, I might have seen
Yon riven oak, the fairest of the green;
And the hoarse raven, on the blasted bough
By *croaking on the left* presag'd the coming blow.
Dryden.

It is to this difference of direction, and the popular creed founded upon it, that Lucretius refers, in the verses before us; which are hence thus translated by Marchetti:

——onde il volante
Foco a noi giunga; o s' ei quindi si volga,
A destra, od a sinistra.

The science of divination is universally attributed to the Tuscans; but its laws, if laws they may be called, were extremely confused, and almost inexplicable. Sometimes, the left quarter was propitious, and sometimes the right: and the interpretation seems rather to have depended upon the will of the auspex, or soothsayer, who was consulted, than upon any fixt principles of doctrine. But I must refer the reader, who wishes for further information upon this subject, to Cicero's treatise on Divination, and Pliny's Natural History, lib. ii. 54.

Insinuarit, et hinc dominatus ut extulerit se.
Quorum operum caussas nullâ ratione videre
Possunt, ac fieri divino numine rentur.
Tu mihi, supremæ præscripta ad candida callis
Currenti, spatium præmonstra, callida Musa,
Calliope! requies hominum, divômque voluptas:
Te duce, ut insigni capiam cum laude coronam.
Principio, tonitru quatiuntur cærula cœli,

Ver. 92. *And, doubtful whence it springs, with headlong haste*] This, and the ensuing verse, by the use of our poet's favourite figure, the periodic iteration, are repeated, with a trifling change, from ver. 58, 59. of the Book before us.

Ver. 95. Calliope! *O, aid me as I tread Now the last limits*——] Thus imitated by Camoens, towards the conclusion of his Lusiad:

Aqui minha Caliope te invoco
Neste trabalho extremo, porque em pago
Me tornes, do que screvo, e em vão pretendo
O gosto d' escrever, que vou perdendo, &c.
Cant. x.

And thou, my Muse! O fairest of the train,
Calliope, *inspire my closing* strain.
No more the summer of my life remains,
My autumn's length'ning evenings chill my veins;
Down the bleak stream of years, by woes on woes
Wing'd on, I hasten to the tomb's repose,
The port whose deep, dark bottom shall detain
My anchor, never to be weigh'd again;
Never, on other sea of life to steer
The human course—Yet thou, O goddess! hear.
Mickle.

Few poets, not writing upon a similar subject, seem to have imitated Lucretius more freely than Camoens, and, consequently, to have been more attached to his style and his metaphors. As I have omitted to notice it in its proper place, I shall here briefly observe, that the comparison of the medicinal potion, and the hesitation of the sick person in swallowing it, on account of its unpalatable taste, introduced into the present Poem, Book I. 999. and Book IV. 10—a passage closely copied, both by Tasso and Spenser—is thus more closely imitated by Camoens:

Em varios pensamentos se derrama:
Fantasiando està remedio certo,
Que desse a quanto mal se lhe ordonava.
Tudo temia, tudo em fim cuidava.
Lus. viii. 86.

Yet as the sick man loaths the bitter draught,
Though rich with health, he knows the cup comes fraught;
His health, without it, self-deceiv'd, he weighs,
Now hastes to quaff the drug, and now delays;
Reluctant thus, as wavering passion veer'd,
The Indian Lord the dauntless Gama heard.
Mickle.

In like manner, the general feeling of voluptuousness and love, which the approach of Venus inspires through every class of the animated world, so exquisitely delineated in the opening of the first Book of the present Poem, is imitated with the utmost taste and elegance in the ninth Canto of the Lusiad, stanzas 67—68.

Algum que em espingardas e nas bestas
Pera ferir os cervos se fiavam, &c.

Ver. 98. *First the blue cope of heaven with thunder shakes*] Our philosophic bard here commences

And, doubtful whence it springs, with headlong haste
Deem it the workmanship of hands divine.

Muse, most expert! belov'd of gods and men,
Calliope! O, aid me as I tread
Now the last limits of the path prescrib'd,
That the bright crown with plaudits I may claim.
First the blue cope of heaven with thunder shakes

---

his explication of the celestial meteors; and opens the list with the phænomenon of the thunder-clap exclusively; which he attributes to a variety of causes, enumerating not less than ten in the course of the discussion, which extends to ver. 162 of the present translation. Our poets of later ages, if they have not been quite so prolific in their references, have, nevertheless, copied from him very considerably, and, like himself, ascribed the origin of thunder to a diversity of operations in the heavens. Of these, Thomson enumerates three. He is speaking of inflammatory substances emitted into the atmosphere in the form of vapour, where gradually they

Ferment; till, by the *touch ethereal* rous'd,
The *dash of clouds*, or *irritating war*
Of fighting winds, while all is calm below,
They furious spring. Summer ii. 1103.

Lucretius, in the *present* instance, is adverting to the second of these, *the dash of clouds against clouds*: a cause of thunder which he offers as the opinion of Epicurus, who appears to have derived it from Democritus, in common, indeed, with the Stoics, and several other schools.

In modern times, at least till the Frankleian discovery of the unity of lightning and electric fire, the theory of thunder has not essentially differed from that generally advanced by the Greek philosophers: and the tremendous peal, as well as the forky corruscation, has been equally attributed to inflammable substances issuing from the bowels of the earth in the form of vapour, attracted by the clouds in their ascent through the regions of the atmosphere, and, at length, suddenly bursting them and taking fire, either in consequence of internal fermentation, or the assault of one cloud thus impregnated against another. Such was the opinion of Newton, Wallace and Homberg.

But the important discovery of Dr. Franklin, in the year 1752, of the identity of lightning, and the electric fluid, has operated a total change in the opinion of the philosophic world, and introduced a new theory, to which every school has confest itself a convert. Yet, although electricity, at least as a science, was totally unknown till within the last century, it is astonishing to observe what a variety of features the hypothesis of Epicurus, now about to be opened by our poet, exhibits in perfect harmony and resemblance with the electric doctrine of the present day. For the school of Epicurus did not admit the origin of *lightning* from nitrous and bituminous vapours ascending from the bowels of the earth, as was afterwards generally contended for, but expressly asserted it to proceed from an accumulation of pure ethereal particles of elementary fire, of most exquisite minuteness, concentrated in the cloud or clouds whence the thunder-storm is used, and there creating a gas or vapour of a peculiar and individual quality. But to this subject we shall have occasion to return in a short time, when our poet enters upon the consideration of lightning, strictly so called, and the effect which it produces: at present, he is confining himself to the thunder-clap alone.

95

Propterea, quia concurrunt, sublime volantes,
Ætheriæ nubes, contra pugnantibus ventis.
Nec fit enim sonitus cœli de parte serenâ;
Verum, ubiquomque magis denso sunt agmine nubes,
Tam magis hinc magno fremitus fit murmure sæpe.
Præterea, neque tam condenso corpore nubes
Esse queunt, quam sunt lapides, ac tigna; neque autem
Tam tenues, quam sunt nebulæ, fumeique, volantes.
Nam cadere aut bruto deberent pondere pressæ,
Ut lapides; aut, ut fumus, constare nequirent,
Nec cohibere niveis gelidas, et grandinis imbreis.
Dant etiam sonitum patuli super æquora mundi,
Carbasus ut quondam, magnis intenta theatris,
Dat crepitum, malos inter jactata, trabesque.
Interdum, perscissa furit petulantibus auris,
Et fragileis sonitus chartarum conmeditatur;
Id quoque enim genus in tonitru cognoscere possis:
Aut, ubi subspensam vestem, chartasque volanteis,
Verberibus ventei vorsant, planguntque per auras.
Fit quoque enim interdum, non tam concurrere nubes

Ver. 99. *When borne through ether, clouds with clouds contend*
By winds adversely driven;——] To the same effect, Milton:

——as when two black clouds,
With heaven's artillery fraught, come rattling on
Over the Caspian, then stand front to front
Hovering a space, till winds the signal blow,
To join their dark encounter in mid air.
Par. Lost, ii. 714.

Ver. 111. *As oft resound the flickering curtains drawn*
O'er the throng'd theatre——] The Roman theatres were open at the top, and occasionally covered over with curtains to screen the audience from the heat of the sun. On the form and luxurious ele-

When, borne through ether, clouds with clouds contend
By winds adversely driven; for nought of sound
Strikes us where pure the concave; but where thick
Clouds heap o'er clouds, there, measur'd by their mass,
The deep-ton'd peal with broad'ning bellow roars.
Then less compact their texture than the frame
Of wood or stone, while less diffus'd by far
Than the loose web of mists, or light-wing'd smoke.
For else, like those, plumb downward must they rush
With flight abrupt, or swift as these dissolve,
Powerless to buoy the measur'd hail or snow.
Then, too, resound they through the sapphire vault,
As oft resound the flick'ring curtains drawn
O'er the throng'd theatre from beam to beam.
And oft, to fragments fritter'd by the blast,
Like crackling scrolls they rattle through the skies:
Whence peals the thunder, as the fluttering sheet
Of parchment crisp, or canvas broad unfurl'd,
Lash'd by the tempest, and to tatters torn.
And frequent the fierce clouds with front direct

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gance of this species of drapery, I have already commented in Note on Book IV. ver. 80, to which I refer the reader for farther information: as also to the same Book, ver. 1239, in the Note on which, the form of the ancient theatre is amply described.

The peculiar rattle here referred to in the thunder-peal, together with the length of its duration, is generally attributed to the sound being excited in the midst of clouds that hang one over the other; in consequence of which the air must be variously and irregularly agitated; whence must ensue a great multitude of different vibrations, every one of which will progressively strike on the ear, and thus perpetuate the volume of sound, till each has completed its effect.

Frontibus advorsis possint, quam de latere ire,
Divorso motu radentes corpora tractim;
Aridus unde aureis terget sonus ille, diuque
Ducitur, exierunt donec regionibus artis.
Hoc etiam pacto, tonitru concussa videntur
Omnia sæpe gravi tremere, et divolsa repente
Maxuma dissiluisse capacis mœnia mundi;
Quom subito validi venti conlecta procella
Nubibus intorsit sese, conclusaque ibeidem,
Turbine vorsante magis ac magis undique nubem,
Cogit, utei fiat spisso cava corpore circum.
Post, ubi conmovit vis ejus, et inpetus acer,
Tum perterricrepo sonitu dat missa fragorem.
Nec mirum, quom, plena animæ, vesicula parva
Sæpe ita dat magnum sonitum, displosa repente.

Ver. 119. *Fight not, but jostle side-long,——*] Both this, and the antecedent mode of attack of cloud against cloud, is thus referred to by Milton:

——the clouds
Jostling, or *push'd by winds*, rude in their shock,
Tine the slant lightning.
Par. Lost, x. 1073.

Ver. 121. *The long-drawn murmur that the soul appa's*
Ere yet the full-mouth'd clangour burst its bounds.] A phænomenon thus elegantly noticed, and described by Thomson:

——a boding silence reigns,
Dread, through the dun expanse; save the dull sound
That from the mountain, previous to the storm,
Rolls o'er the muttering earth, disturbs the flood,
And shakes the forest leaf without a breath.
Summer, 1116.

The thunder-cloud, properly so called, when largely impregnated with electric ether, attracts, with immense velocity, all the smaller clouds that are in its vicinity: and it is probable that the vibratory agitation produced in the air by the rapid motion of these adscititious clouds, as Sig. Beccaria denominates them, produces the peculiar rustle or murmur here accurately remarked.

In this delineation of Thomson, there is a surprising resemblance to the following passage of Aratus, who was a contemporary and friend of Theocritus, and to whom the latter addressed his sixth Idyl:

Σημα δε τοι ανεμοιο, και οιδανουσα θαλασσα
Τιγησθω· και μακροι επ' αιγιαλοι βοωντες,

Fight not, but jostle side-long, with the strife
Their total tracts abrading; whence the harsh,
The long-drawn murmur that the soul appals
Ere yet the full-mouth'd clangour burst its bounds.
Then things with thunder oft, perchance, may quake,
And heaven's high walls be shatter'd through their cope,
When air elastic, by capacious clouds
Absorb'd redundant, once ferments abrupt,
Broad'ning their central hollows as it spreads,
And close their sides condensing, till, at length,
Rends the pent power its prison, and aloft
Roars o'er the world the repercussive shock.
Nor wond'rous this, since, fill'd with vapour, e'en
The bursting bladder loud alike resounds.

Ακται τ' εναλιοι, οτ' ευδιοι ηχησσα
Τιγγονται, κομφαι τε βομβεναι ουριος ακραι

Whence, doubtless, the following of Virgil:

Continuo ventis surgentibus, aut freta ponti
Incipiunt agitata tumescere, et aridus altis
Montibus audiri fragor; aut resonantia longe
Littora misceri, et nemorum increbescere murmur.
Georg. i. 356.

Lo! to the gathering storm, amid the deep
The troubled ocean swells its billowy sweep;
Loud rings the crash upon the mountain brow,
Hoarse murmurs mingle from the shores below,
And ceaseless rustling of each woodland vale,
Sighs to the horrors of the rushing gale. Sotheby.

Ver. 131. *Nor wond'rous this, since, fill'd with vapour, e'en*
The bursting bladder loud alike resounds.] This additional cause of the intonation of thunder, together with the simile with which it is illustrated, is copied from our poet, both by Pliny, Nat. Hist. ii. 431, and Isidorus, Orig. xiii. 8. The passage of the latter I shall extract, as a comment upon the verses before us:—"cum procella vehementissimi venti nubibus se repente immiserit, turbine invalescente, exitumque quærente, nubem quam excavavit, impetu magno proscindit; ac sic cum horrendo fragore defertur ad aures. Quod mirari quis non debet, cum vesicula, quamvis parva, magnum tamen sonitum displosa emittat." "It intermingles itself (tonitruum, the matter of thunder) abruptly amidst the clouds, during a violent blast of wind, when the whirlwind ceasing, and endeavouring to obtain for itself an exit, it hollows the cloud into which it has entered, and with great force bursts it asunder, and thus strikes on our ears with tremendous roar. Which effect, ne-

Est etiam ratio, quom ventei nubila perflant,
Ut sonitus faciant; et enim ramosa videmus
Nubila sæpe modis multis, atque aspera, ferri.
Scilicet ut crebram sylvam quom flamina Cauri
Perflant, dant sonitum frundes, rameique fragorem.
Fit quoque, ut interdum validi vis incita venti
Perscindat nubem, perfringens inpete recto.
Nam, quid possit ibei flatus, manifesta docet res
Heic, ubi lenior est, in terrâ, quom tamen alta
Arbusta evolvens radicibus haurit ab imis.

Sunt etiam fluctus per nubila, quei quasi murmur
Dant in frangundo graviter: quod item fit in altis
Fluminibus, magnoque mari, quom frangitur æstu.
Fit quoque, ubi e nube in nubem vis incidit ardens
Fulminis: hæc, multo si forte humore recepit
Ignem, continuo magno clamore trucidat:
Ut calidis candens ferrum e fornacibus olim
Stridit, ubi in gelidum propter demersimus imbrem.

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rerthcless, cannot be wondered at, since even the smallest bladder, when suddenly ruptured, emits a considerable sound."

Ver. 150. ——*as the red-hot steel*
Fresh from the forge wide hisses——] Lucretius here adopts the general opinion of Anaxagoras upon the cause of the thunder-clap; and supposes that, occasionally, some of the clouds, during the tempest, are loaded with aqueous vapour, and others with the igneous ether of the lightning; in consequence of which, when the latter burst their boundary, and dash with impetuosity through the involucrum of the former, the same kind of crash is produced as when red-hot iron is suddenly plunged into water: a fact thus described more at large by Virgil, in his

Oft, too, perchance, the bick'ring blast itself,
Borne 'gainst the clouds direct, the crash creates:
For ragged oft in various shapes they fly,
Ramous and wavy, hence sonorous too;
As when the north-east whistles through the groves
The leaves all rustle, and the branches crack:
Or, haply else, the horizontal gust,
Urg'd on abrupt, may rend the cloud in twain.
For what its force here oft on earth we learn,
On earth where gentler, but where still its rage
Roots up the forest headlong from its base.
Work'd into billows, too, the clouds, at times,
Conflicting murmur as the torrent tide
Of streams or ocean by the tempest tost.
Oft springs the roar, too, when from cloud to cloud
Darts the blue lightning sudden: these, if fill'd
With limpid vapour, instant the fierce flash
Quench with vast clamour, as the red-hot steel
Fresh from the forge wide hisses when the smith
Deep drowns its fury in the gelid pool.

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account of the Cyclops, to whom the forging of the thunder-bolt was attributed by the poets:

Quam subter specus et Cyclopum excsa caminis
Antra Ætnæa tonant, validique incudibus ictus
Auditi referunt gemitum, striduntque cavernis
Stricturæ chalybum, et fornacibus ignis anhelat:
Vulcani domus et Vulcania nomine tellus.
Æn. viii. 418.

——deep below
In hollow caves the fires of Ætna glow.
The Cyclops here their heavy hammers deal;
Loud strokes and *hissings of tormented steel*
Are heard around: the boiling waters roar,
And smoking flames through fuming tunnels soar.
Dryden.

Aridior porro si nubes adcipit ignem,
Uritur ingenti sonitu, subcensa repente:
Lauricomos ut si per monteis flamma vagetur,
Turbine ventorum, conburens, inpete magno.
Nec res ulla magis, quam Phœbi Delphica laurus
Terribili sonitu, flammâ crepitante, crematur.
Denique, sæpe geli multus fragor, atque ruina
Grandinis, in magnis sonitum dat nubibus alte:
Ventus enim quom confercit, franguntur, in artum
Concretei, montes nimborum et grandine mixtâ.

Ver. 155. *Fires the loose brand the laurel-crested hills, Decrepitating loud, for louder nought*, &c.] The adaptation of the sound to the sense, in the original, is very happy, and ought not to pass unnoticed, ver. 154:

Terribili sonitu, flammâ crepitante, crematur.

The elegant Vida could not be inattentive to an ornament of this description: he has, accordingly, copied the greater part of the verse in describing a similar conflagration:

Sicubi Vulcanus sylvis incendia misit,
Aut agro, stipulas *flammâ crepitante cremari*.
Poet. iii. 398.

When angry Vulcan rolls a flood of fire,
When on the groves and fields the deluge preys,
And wraps the crackling stubble in the blaze.
Pitt.

With this passage of our poet, we ought to have an opportunity of comparing the following similar picture in Virgil:

Nam sæpe incautis pastoribus excidit ignis,
Qui furtim pingui primum sub cortice tectus
Robora comprêndit, frondesque elapsus in altas
Ingentem cælo sonitum dedit: inde secutus
Per ramos victor, perque alta cacumina regnat,
Et totum involvit flammis nemus, et ruit atram
Ad cœlum picæâ crassus caligine nubem;
Præsertim si tempestas a vertice sylvis
Incubuit, glomeratque ferens incendia ventus.
Hoc ubi, non a stirpe valent, cæsæque reverti
Possunt atque imâ similes revirescere terrâ:
Infelix superat foliis oleaster amaris.
Georg. ii. 303.

For oft, by careless shepherds left behind,
Fire lurks unseen beneath the unctuous rind,
Seizes the trunk, amid the branches soars,
Sweeps through the blazing leaves, and fiercely roars:
From bough to bough th' insulting victor spreads,
Pursues his conquest o'er their topmost heads,
Sheets the whole wood in flame, and, upwards driv'n,
Blackens the sun, and fills the cope of heav'n:
But chief, whene'er the rushing blast conspires,
Kindles each spark, and gathers all their fires.
Ah! hope not from the root reviving bloom!
No kindred race shall flourish from the tomb;
Sad, mid their ashes, o'er the desert strown,
Stands the wild olive in the waste, alone.
Sotheby.

But if the cloud be sere, with blaze abrupt
Flames it sonorous; as, when blown by storms,
Fires the loose brand the laurel-crested hills,
Decrepitating loud, for louder nought
In conflagration crackles than the tree
Sacred to Phœbus on the Delphic mount.
While not unfrequent may the din resound
From ice or hail-clouds, by the whizzing wind
Lash'd till they fracture, and, with clattering crash,
Falls the dread avalanche, down dash'd amain.

Ver. 156. ——*for louder nought*
In conflagration crackles than the tree——] The fable referred to is too trite for detail: but the peculiar crackling of the laurel tree in the act of conflagration, thus noticed by our poet, is corroborated, as Lambinus has justly observed, by the following passage in Pliny. Nat. Hist. xv. 40. Laurus quidem manifesto abdicat ignes *crepitu*, et quadam detestatione. "The laurel shows obviously, *by its crackling*, how much it detests the blazing fire."

To which Mr. Wakefield has added this additional testimony, from Ovid:

Et *crepet* in mediis *laurus adusta* focis.
Fast. iv. 742.

And the sere laurel crackles o'er the hearth.

Almost, literally, the language of Goldsmith:

The cricket chirrups *on the hearth*,
The crackling faggot *flies*.

Ver. 162. ——*avalanche*,——] The term is now sufficiently naturalized for poetic use; and is well known to imply the sudden fall of those immense mountains of ice, which, in Switzerland, and other precipitous countries, are occasionally detached from their parent and impending mass, and, by their abrupt descent, not unfrequently overwhelm and bury a whole cottage and its inhabitants. The literal rendering of the text, which is as follows,

——in artum
Concretei, montes nimborum et grandine mixtâ,

is to this purpose, "mountains of clouds intermixed with hail-stones, concreted into one compact substance." The radical verb *avale*, to *hasten down*, or *vale*-wards, has, indeed, been long known to English bards of the first reputation, and was not unfrequently employed by them in earlier æras. Thus Spenser:

By that th' exalted Phœbus 'gan *avale*
His weary wain, and now the frosty night
Her mantle black through heav'n 'gan overhale.

The mountains of ice here specified by our poet to exist occasionally in the superior regions of the atmosphere, are thus referred to by Milton in terms surprizingly similar:

As when two polar winds, blowing adverse
Upon the Cronian sea, together drive
Mountains of ice, that stop th' imagin'd way
Beyond Petsora eastward. Par. Lost, x. 289.

That hail-stones are thus frequently conglomerated in their own clouds, into large masses of ice, can admit of no doubt: these, in the midst of thunder-storms, are often precipitated to the earth, and are regarded, by the multitude, as thunder-balls or thunder-bolts,

Fulgit item, nubes ignis quom semina multa
Excussere suo concursu; ceu lapidem si
Percutiat lapis, aut ferrum: nam tum quoque lumen
Exsilit, et claras scintillas dissupat ignis.
Sed tonitrum fit utei post auribus adcipiamus,
Fulgere quam cernant oculei, quia semper ad aureis
Tardius adveniunt, quam visum, quæ moveant, res.
Id licet hinc etiam cognoscere: cædere si quem
Ancipiti videas ferro procul arboris auctum,
Ante fit ut cernas ictum, quam plaga per auras
Det sonitum: sic fulgorem quoque cernimus ante,
Quam tonitrum adcipimus, pariter qui mittitur igni

though, in reality, they have only been detached from their aërial station by the violence of the tempest, and, perhaps, at the same time, have been shivered into fragments extremely minute in comparison with the magnitude of the original quarry.

The entire phænomenon is thus painted by Thomson:

Oft rushing sudden from the loaded cliffs
Mountains of snow their gathering terrors roll:
From steep to steep, loud-thundering, down they come;
A wintry waste in dire commotion all;
And herds and flocks, and travellers and swains,
And sometimes whole brigades of marching troops,
Or hamlets sleeping in the dead of night,
Are deep beneath the smothering ruin whelm'd.
Winter, 416.

Ver. 163. *But the blue lightning springs from seeds of fire*] Having discussed the phænomenon of the *tonitrus*, or thunder-peal, our poetic philosopher now proceeds to the consideration of the *fulgur*, the flash, or corruscation by which it is generally introduced; but since this, as in the case of the Aurora Borealis, is frequently a solitary meteor, he endeavours to account for its existence in a variety of ways, independently of the thunder itself. He apprehends, that the cloud or substratum whence it issues, contains a vast multitude of attenuate fiery particles, and that these, when conflicting with each other, in consequence either of internal commotion, or the combat of clouds against clouds, produce, by their junction, palpable aërial streams of fire, in the same manner as the particles of fire contained in steel or flint become visible when struck against other fragments of flint or steel: and that when the thunder-peal accompanies them, they first rush upon the external senses, because possest of a much greater velocity of motion. His second explanation is, that the combination of these igneous particles in the interior of a cloud may sometimes generate such a degree of heat, and, consequently, so extremely rarefy the contained and elastic air as to burst the cloud altogether, and thus exhibit the inclosed igneous meteor to the naked eye, "scattering long trails of corruscating fire" through the horizon. To

But the blue lightning springs from seeds of fire
With seeds conflicting mid the war of clouds.
As when the flint with flint, or steel, contends,
Swift flows the flash, and sparkles all around.
Then earlier see we, too, the rushing blaze
Than hear the roar, since far the fluent films
Of sight move speedier than of laggard sound.
As, when the woodman fells some branch remote,
It drops conspicuous ere the bounding blow
Strike on the ear—so the keen lightning far
Anticipates the thunder, though alike

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these a third solution is added, to wit, that occasionally the pent-up and elastic air may, from its increased rarefaction, extrude a vast multitude of these igneous and attenuate particles through the pores of the cloudy film, without breaking its texture: while, at other times, this texture may be so extremely abraded, beneath the repercussion of a violent whirlwind, as to be completely worn through, and thus compelled to scatter the combined etherial fire that exists in its interior. In these various explanations of the phænomenon of lightning, as in his explanations of the celestial sphere, our poet advances the best supported opinions of his own æra, without strenuously opposing, or contending for one rather than another.

Ver. 166. *Swift flows the flash, and sparkles all around.*] Creech, who seldom does his author all the justice to which he is entitled, but who, nevertheless, is perpetually attempting to improve upon him, as I have often had occasion to remark heretofore, adds gratuitously to the original text, in this place, the following conceit:

——the scatter'd light
Breaks swiftly forth, and wakes the sleepy night;
The night, amaz'd, begins to haste away,
As if those fires were beams of coming day.

Ver. 168. ——*since far the fluent films*
Of sight move speedier than of laggard sound.] The Epicurean doctrine of the senses has been already fully developed in Book IV. of this Poem: but with respect to the immediate axiom before us, as applied to the phænomena of the thunder-clap, and the electric flash, it is thus fully corroborated by Aristotle, Meteor. lib. ii. γινεται δε μετα τον πληγην και υστερον της βροντης, αλλα φαινεται προτερον δια το την οψιν προτερον της ακοης: "The vibratory flash takes place after the thunder-clap, but is perceived first, because the sense of seeing is swifter than that of hearing." To the same effect, Isidorus, lib. c. v. 128. The illustration of the woodman felling a tree at a distance, is beautifully selected by our poet; and can only, perhaps, be exceeded by the flash and report of the cannon of modern times.

E simili caussâ, concursu natus eodem.
Hoc etiam pacto, volucri loca lumine tinguunt
Nubes, et tremulo tempestas inpete fulgit:
Ventus ubi invasit nubem, et vorsatus ibeidem
Fecit, ut ante, cavam, docui, spissescere nubem;
Mobilitate suâ fervescit, ut omnia motu
Percalefacta vides ardescere: plumbea vero
Glans etiam longo cursu volvunda liquescit:
Ergo fervidus hic, nubem quom perscidit atram,
Dissupat ardoris, quasi per vim expressa, repente
Semina, quæ faciunt nictantia fulgura flammæ:
Inde sonus sequitur; qui tardius adlicit aureis,
Quam quæ perveniunt oculorum ad limina nostra.
Scilicet hoc densis fit nubibus, et simul alte
Exstructis aliis alias super inpete miro.

Ne tibi sit fraudi, quod nos inferne videmus
Quam sint lata magis, quam sursum exstructa quid exstent.
Contemplator enim, quom, montibus adsimilata,
Nubila portabunt ventei transvorsa per auras;

Ver. 178. *That hollow broad'ning, as already sung,*] See v. 127. of the Book before us.

Ver. 182. ——*as melt the missile balls, at times,*
Of lead shot rapid.——] We know but very little of the immense powers of many of the mechanical engines employed by the Greeks and Romans, on which subject, I must, nevertheless, request the reader to consult the Note on Book IV. v. 924. The fact here adverted to by our poet is by no means difficult to be conceived; and from a similar and concurrent allusion of both Virgil and Ovid, there can be no doubt of its truth. Thus the former, describing the enormous muscular strength of Mezentius:

Rear'd from one cause, from one concussion rear'd.
Or haply hence the winged lustre springs
Trembling amid the tempest; that when air,
Pent in the hollow of a cloud, ferments,
That hollow broad'ning, as already sung,
And close its sides condensing, the pent air
Heats from its motion; as, from motion, heats
All sight surveys; work'd oft to flame, and oft
Melted, as melt the missile balls, at times,
Of lead shot rapid. Heated thus, at length,
Th' expanded air bursts sudden from its tomb,
Scatt'ring long trails of corruscating fire.
Then rolls the dread explosion, after heard,
Since sound than light far tardier meets the sense.
Yet scenes like these in clouds alone exist
Of utmost depth, whirl'd mass o'er mass immense.
Nor such conceive exist not, but that sole
Breadth they possess, of substance ever void.
For mark what clouds of mountain-bulk the winds

Ipse ter adducta circum caput egit habenâ;
Et media adversi *liquefacto* tempora *plumbo*.
Æn. ix. 587.

Thrice whirl'd he round his head:
And as it flew, *dissolv'd the missile lead.*

In like manner the latter, describing the dissolution of the body of Romulus, in his ascent through the regions of the air:

——Corpus mortale per auras
Dilapsum tenues; ceu lata *plumbea* funda
Missa solet *medio glans* intales *ære* cavo.
xiv. 824.

To liquid air dissolves his mortal frame:
So the *fleet lead* when once, with dextrous aim,
Hurl'd from the nervous slinger, as it flies,
Fires in its course, and melts along the skies.

Aut ubi per magnos monteis cumulata videbis
Insuper esse aliis alia, atque urguere supernâ
In statione locata, sepultis undique ventis:
Tum poteris magnas moleis cognoscere eorum,
Speluncasque velut, saxis pendentibus structas,
Cernere; quas ventei quom tempestate coortâ
Conplerunt, magno indignantur murmure clusei
Nubibus, in caveisque ferarum more minantur:
Nunc hinc, nunc illinc, fremitus per nubila mittunt;
Quærentesque viam, circumvorsantur, et ignis
Semina convolvunt e nubibus; atque ita cogunt
Multa, rotantque cavis flammam fornacibus intus,
Donec divolsâ fulserunt nube coruscei.

Hac etiam fit utei de caussâ mobilis ille
Devolet in terram liquidi color aureus ignis;
Semina quod nubeis ipsas permulta necesse est
Ignis habere: et enim, quom sunt humore sine ullo,

Ver. 195. *View what vast loads, accumulated deep,*
Roll, tire o'er tire, through ether; ——] A similar force of imagery is employed by Isaiah, ch. viii. 22.

ופנה למעלה ואל ארץ יביט
והנה צרה וחשכה
מעוף צוקה ואפלה מנדח׃

And above shall they look, and to the earth cast their eyes,
And, behold! horror and black tempest,
Gloom heap'd together, and conglomerated darkness.

A passage, however, which Isaiah seems to have imitated from the following of Job, in which the afflicted patriarch execrates his birth-day with the most fearful energy of language, ch. iii. 4, 5.

היום ההוא יהי חשך
אל ידרשהו אלוה ממעל
ואל תופע עליו בהרה׃
יגאלהו חשך וצלמות
תשכן עליו עננה
יבעתהו כמרירי יום׃

Be that day the darkness of horror!
Let God, from above, reject it!

Drive thwart the welkin when the tempests rave;
Or climb the giddy cliff, and, e'en in calms,
View what vast loads, accumulated deep,
Roll, tire o'er tire, through ether; and thou, then,
Must own their magnitudes, and well may'st deem
What caves stupendous through such hanging rocks
Spread; what wild winds possess them, through the storm
Roaring amid their bondage, as, at night,
Roar through their dens, the savage beasts of prey.
How strive they stern, now here, now there convolv'd,
Through every point, for freedom, and the seeds
Of latent fire elicit as they roll
Till the full flame concentrate, and the blaze
Shoot o'er the heavens as now the big cloud bursts.

Hence, too, perchance, the golden-tressed stream
Of liquid fire through ether oft may play:
That the pure texture of the cloud itself
Holds many an igneous atom whence, when dry,

Let no sun-shine irradiate it!
Let thick gloom, and the shadow of death crush it;
Accumulated vapours fix over it their pavilion,
And the black-storm of the day terrify it.

Ver. 207. ——*the golden tressed stream*
Of liquid fire ——] Thus Virgil:

Semina, terrarumque animæque, marisque fuissent,
Et *liquidi* simul *ignis*. Ecl. vi. 33.

The seeds he sung of heaven, and earth, and main,
And *liquid fire*.

And hence too, as Mr. Wakefield observes, Coripus, De Divina Sapientia:

Et cœli *liquidos* formatrix condidit *ignes*. ii. 16.

And, plastic, rear'd the *liquid fires* of heaven.

Yet the following, from Polignac, is more apposite than either of the above, and was doubtless drawn from the passage immediately before us:

Auricomum solem, cœli qui templa *rigando*,
Et maria, et terras fecundâ lampade lustrat.
Anti-Lucr. viii. 18.

The golden-tressed sun, whose radiant lamp
Earth, ocean, and the fane of heaven *bedews*.

Flammeus est plerumque colos, et splendidus, ollis.
Quippe et enim solis de lumine multa necesse est
Concipere, ut merito rubeant, igneisque profundant.
Hasce igitur quom ventus agens contrusit in unum
Conpressitque locum, cogens; expressa profundunt
Semina, quæ faciunt flammæ fulgere colores.

Fulgit item, quom rarescunt quoque nubila cœli.
Nam, quom ventus eas leviter diducit eunteis,
Dissolvitque, cadant ingratiis illa necesse est
Semina, quæ faciunt fulgorem: tum sine tetro
Terrore et sonitis fulgit, nulloque tumultu.

Ver. 210. ——*whence, when dry,*
Springs the bright flame, the splendid hues evinc'd.]
The rich and beautiful colours of the clouds are supposed, by our poet, to result from their containing a vast multitude of igneous atoms in a state of combination, and hence of lambent flame, discernible through the nebular woof when perfectly dry. The conjecture is ingenious, but by no means satisfactory; nor is it positively decided, even in the present day, to what cause this splendid appearance is to be attributed. And first, as to the blueness of the sky itself. This was long maintained by Leonardo di Vinci, and his followers, to be produced on the principle, that a black body, viewed through a thin white medium, creates the sensation of blue; the immense depth of the sky, it was contended, must necessarily be black, as being wholly devoid of reflected light; but this blackness, it was added, being perceived by ourselves through the common medium of the intermixed rays of reflected light, which, in consequence of such intermixture, are rendered white, or at least whitish, it must of course soften into a general and homogeneous azure. Newton, however, was not satisfied with this explanation, and hence instituted a new hypothesis, by which he endeavoured at once to account both for the blueness of the sky, and the red and yellow tinctures of the clouds. He asserted, that all vapours, as they ascend from the earth, become, in the act of condensing, first of such a texture as to reflect the azure rays, before they coalesce into clouds capable of reflecting any other; whence, on their first ascent, though an unclouded atmosphere, prior to their becoming objects of vision, they necessarily reflect one uniform blue: but as the condensation increases, they unite into globules of a great diversity of magnitudes, till they at length acquire the size of drops of rain; and, in consequence of such diversities, are capable of refracting, reflecting, and transmitting all that rich and beautiful variety of colours to the general body of these clouds, which are created by their union.

This explanation, however, has appeared as little satisfactory to many philosophers, as the former hypothesis of Leonardo di Vinci; and it has been successfully controverted by Bouguer and Melville. "Why," says the latter, alluding to the undeviating crimson of the morning and evening sky, "should the particles of the clouds become, at those particular times, and never at any other, of such a magnitude as

Springs the bright flame, the splendid hues evinc'd.
For from the sun such seeds the clouds must drink,
Pour'd down perpetual, or their rain-bow skirts
No lustre e'er could redden. These when once
To narrower spheres the lashing winds compress,
Forth from their pores the radiant atoms start,
And wave the serpent-brandish through the skies.
Thus springs the flash, too, when the filmy clouds
Abrade beneath the whirlwind: for, so thin
Wears oft their web by friction, the red seeds
Drop, unconfin'd, wide-glitt'ring. But the blaze
Then noiseless spreads, innocuous, and serene.

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to separate these colours alone? And why are they rarely, if at any time, seen tinctured with blue and green, as well as red, orange and yellow?" And he immediately proposes an explanation, which appears far more simple and correct than either of the former. "Is it not more credible," says he, "that the separation of rays is made in passing through the horizontal atmosphere, and that the clouds only reflect and transmit the sun's light, as any half-transparent colourless body would do? For, since the atmosphere reflects a greater quantity of blue and violet rays than of the rest, the sun's light transmitted through it ought to incline towards yellow, orange, or red: especially when passing through a protracted volume of air; whence the sun's horizontal light, or that of morning and evening, must necessarily be tinctured with a deep orange, and even red; and the colour become still deeper after sun-set, or before sun-rise." Upon which theory he concludes, that the clouds, at different altitudes, may exhibit every possible combination of colours, by merely reflecting the sun's incident light as they receive it.

As to the blue of the atmosphere, M. Bouguer, ingeniously enough, attributes it to the constitution of the air itself, by which the fainter coloured rays of violet, indigo, and blue, are incapable of urging their way through any considerable tract of it; and upon the same principle he accounts for the blue shadows with which the air often abounds, and particularly on the summits of immense and distant mountains. Traité d' Optique.

Ver. 218. *Thus springs the flash, too, when the filmy clouds*
Abrade beneath the whirlwind:——] The last cause advanced by our author in ver. 207, and following, appears to have been the theory of Empedocles and Anaxagoras: the present was asserted by Anaximenes, Anaximander, Xenophanes, and several others, as we are informed by Stobæus.

Ver. 221. *What next ensues, the substance of that forms*
Oft the dread bolt the mystic meteor shoots,——] The phænomenon of thunder was divided by the ancient philosophers into three parts: these the

Quod super est, quali naturâ prædita constent
Fulmina, declarant ictu subinusta vaporis
Signa, notæque, graveis halantes sulfuris auras.
Ignis enim sunt hæc, non venti, signa, neque imbris.

Præterea, sæpe adcendunt quoque tecta domorum,
Et celeri flammâ dominantur in ædibus ipsis.
Hunc tibi subtilem, cum primis ignibus, ignem
Constituit natura, minutis motibus atque
Corporibus; quoi nihil omnino obsistere possit:
Transit enim validum fulmen per sæpta domorum,

Greeks denominated βροντη, αστραπη, κεραυνος; and the Romans, tonitrus, fulgur, fulmen; corresponding among ourselves with the terms, thunder-peal, thunder-flash, and thunder-bolt. Our poet, having examined and illustrated the two former branches of this extraordinary meteor, now proceeds to the consideration of the third, the thunder-bolt, or immediate agent of mischief, in the discharge of the thunder-cloud. He pursues the inquiry minutely; examines into its nature, its mode of production, its velocity, and in what seasons of the year it is most frequent; concluding the subject with some severe animadversions upon the absurd superstition of those who ascribed the creation of the thunder-bolt to Jupiter; as well as of those who, like the Tuscans, deduced their doubtful and idle auguries from this phænomenon. The discussion extends to ver. 434. of the Book before us.

And first, with respect to its nature. Our philosophic bard asserts it to be a power originating from a peculiar species of igneous corpuscles in a state of combination, hereby forming a gass or fluid, infinitely more subtile and active than the light that streams from the sun; capable of transpiercing or breaking every substance against which it impinges, and of producing effects more powerful and astonishing than any other known agent. These active and impalpable atoms he supposes to be thrown forth, partly from the substance of the earth, and partly from that of the sun; to consist of fire, and fire alone, and to have no common property with elastic air, or showers, or any other matters with which they may accidentally be combined. He also asserts, that in their explosion they let loose a considerable portion of sulphureous vapour, which is almost always in some degree or another diffused through the atmosphere.

Such, in few words, was the theory of Epicurus upon this subject, and such is, consequently, the theory maintained in the text. And here it cannot but be observable, however novel the science of electricity, and especially its application to the meteor before us, that the Epicurean hypothesis bears a much more striking resemblance to the system which is founded upon this modern discovery, than it does to that which immediately preceded it, and which has scarcely yet given way in every quarter to its triumph. I mean that which attributed the corruscation or flash, to mere combustible vapours in the atmosphere, such as nitre, sulfur, and bitumen.

The Franklinian theory, like the Epicurean, sup-

What next ensues, the substance what that forms
The bolt, at times, the mystic meteor shoots,
This its own stroke betrays, its caustic scathe,
And the foul scent of sulfur steaming round;
Marks not of wind, or shower, but fire alone:
While, oft, the volant mischief we behold
Domes, towers, and temples kindling into flame.
This igneous shaft, then, nature rears, recluse,
From subtlest fires, from atoms most minute,
Vivacious most, that nought can e'er resist.
For e'en through walls it pierces, as the power

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poses the existence of a peculiar gass or fluid, in many respects approaching much more nearly the nature of fire than of any other attenuate substance with which we are acquainted; but which, nevertheless, is extremely different, as well from solar as from culinary fire; which is inconceivably more powerful than either of them, and is universally dispersed through the substance of the earth, through which it strays in irregular tides or directions, deserting some parts, and accumulating in others. It supposes, that wherever there is any undue accumulation, the excess instantly flies upwards, from such overloaded spot, into the atmosphere, where, like other terrestrial gasses or vapours, it often concentrates itself within the bosom of some neighbouring cloud. While this cloud passes over such portion of the earth as is equably charged with the electric aura, all is quiet and composed; but the moment it reaches a spot where there is a deficiency of such aura, an attraction between the deficient earth and the overloaded cloud instantaneously takes place; the cloud is violently agitated, and at length broken to shivers, and the confined electric fluid descends abruptly to the surface of the earth, in order to restore its electric equilibrium. In escaping from the cloud in which it is imprisoned, it suddenly and violently bursts the texture of the cloud, whence the air becomes agitated, and the roar is produced which we denominate a thunder-clap; while from the closer contact and concentration of the electric particles, the elementary fire they contain becomes palpable, and exhibits the appearance of a flash, or vibratory blaze, which, in directing its course towards the deficient, or negative stratum of the earth, rushes with such extreme subtlety and rapidity as to overpower all resistance, and to permeate or destroy every intervening substance; whence the dreadful mischief which frequently ensues, without a possibility of escaping from the danger. The grand difficulty which attaches to this system, and it is a difficulty which is not yet altogether removed, is, in what manner this subtle aura becomes at times so unequally diffused throughout the body of the earth? and how it comes to pass that the balance is rather attempted to be restored by the circuitous ascent and travel of the surplus through the atmosphere, than in a right line through the pores of the earth itself?

Clamor uti, ac voces; transit per saxa, per æra;
Et liquidum puncto facit æs in tempore, et aurum.
Curat item, vasis integris vina repente
Diffugiant: quia, nimirum, facile omnia circum
Conlaxat, rareque facit lateramina vasi,
Adveniens calor ejus; ut, insinuatus in ipsum,
Mobiliter solvens differt primordia vini:
Quod solis vapor ætatem non posse videtur
Ecficere, usque adeo cellens fervore corusco:
Tanto mobilior vis, et dominantior, hæc est.

Nunc, ea quo pacto gignantur, et inpete tanto
Fiant, ut possint ictu discludere turreis,
Disturbare domos, avellere ligna trabesque,
Et monimenta virûm conmoliri atque ciere,
Exanimare homines, pecudes prosternere passim;
Cætera de genere hoc quâ vi facere omnia possunt,
Expediam, neque te in promissis plura morabor.

Fulmina gigni de crassis, alteque, putandum est,

Ver. 235. *The solid brass hence, instant, turn'd to stream.*] In a similar manner Claudian, and with much elegant taste, as Havercamp has justly noticed:

——hic tabescente solutus
Subsidit galeâ; liquefactaque fulgure cuspis
Candit, et subitis fluxere vaporibus enses.
Sext. Cons. Honor. 344.

Down breathless sunk he, melted all his helm,
His liquid lance beneath the flash dissolv'd,
And swords oppos'd fus'd instant into swords.

Ver. 236. *While oft the vase it empties of its wine,*
Yet leaves uninjur'd;——] This fact is expressly mentioned by Pliny, in a passage cited by Lambinus, on the present occasion. Nat. Hist. ii. 52. "Tertium est (genus fulminis) quod clarum vocant, mirificæ maximæ naturæ, quo dolia exhauriuntur, intactis operimentis, nulloque alio vestigio relicto." "There is a third kind of lightning, which is named perspicuous, and is possest of a most wonderful property; for it will empty vessels of

Of voice or sound, through rocks and solid brass;
The solid brass hence, instant, turn'd to stream.
While oft the vase it empties of its wine,
Yet leaves uninjur'd; loos'ning all around,
And wide each pore relaxing, that within
May wind its heat mysterious, and to seeds
Primal, resolve and scatter all contain'd.
Effect the solar lustre in an age
Could ne'er accomplish—so superior this
In force severe, and keen vivacious flight.

Next whence these fires are gender'd, and the power
Peerless they boast e'en ramparts to subvert,
Whole towns to tumble, and their splinter'd beams
Whirl through the heavens,—the heroe's tomb dispart,
Shatter'd to dust, and prostrate o'er the ground
Sheep, and the shepherd breathless all alike—
Whence these, and equal wonders they achieve
Haste we to solve, nor longer urge delay.

From dense, dark clouds rear'd mass o'er mass sublime,

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their contents, while the substance of the vessel remains untouched, and no other mark of its presence is exhibited." The two other classes of lightning to which Pliny here refers, are those denominated by Aristotle καπνώδης and λαμπρὸς, swarthy, and brilliant or penetrative; the first leaving a black discoloration behind, and the second transpiercing the substance on which it alights, without any kind of detriment, or even mark of its attack.

Ver. 239. ——*and to seeds*
Primal, resolve and scatter all contain'd.] De Couture's version of the whole of this passage is so extraordinary, that I cannot avoid inserting it. "Il s'insinue de maniere qu'elle fait evaporer les principes du vin, *qui atturent avec eux* [illegible] ce que les exhalaisons brûlantes du soleil ne peuvent faire par l'espace des temps [illegible] chaleur soit admirable.

Nubibus exstructis: nam cœlo nulla sereno,
Nec leviter densis mittuntur nubibus umquam.
Nam dubïo procul hoc fieri manifesta docet res;
Quod tunc per totum concrescunt aëra nubes
Undique, utei tenebras omneis Acherunta reamur
Liquisse, et magnas cœli conplesse cavernas:
Usque adeo, tetrâ nimborum nocte coortâ,
Inpendent atræ Formidinis ora superne,
Quom conmoliri tempestas fulmina cœptat.
Præterea, persæpe niger quoque per mare nimbus,
Ut picis e cœlo demissum flumen, in undas
Sic cadit, et fertur tenebris procul; et trahit atram,
Fulminibus gravidam, tempestatem, atque procellis;

Ver. 256. *Blackens throughout, beneath the clustering crowd*] This, and the three ensuing verses, are repeated from Book IV. 174; and with admirable force and propriety adapted to the present description. Lucretius was no vulgar observer of natural events: he saw every thing with the eye of science, as well as felt every thing with the sensibility of a poet: no lineament was too minute to escape the curiosity of his attention: and his account in this place of the rise and progress of the thunder-storm, is so parallel with the history of it, as narrated by Beccaria, that I shall endeavour to exhibit the observations of the Italian philosopher in as few words as possible for a comparison. The thunder-storm, says the latter, is introduced by the appearance of one or more dense clouds, in a calm and quiet atmosphere, augmenting rapidly in size from its attracting to itself, where it proceeds from a single cloud, the smaller and lighter, or adscititious cloudlets in its vicinity, till the whole coalesces, and becomes one uniform mass, piled cloud over cloud with homogeneous arches above, but fringed and ragged, and dreadfully black on its lower surface; considerable portions being apparently detached towards the earth, yet without quitting their connexion with the main body. Though in some cases, instead of these fringed and detached fragments pointing downwards, the whole of the lower surface seems to swell into distinct, but vast protuberances, each still bending towards the earth, and occasionally nearly touching its bosom. When the original thunder-cloud has thus acquired a sufficient augmentation both in depth and breadth, the matter of the lightning it contains strikes between itself and the earth in two opposite directions, the path of the corruscation stretching through the whole substance of the cloud and its adscititious branches. From the agitation thus produced amidst the latter, the imprisoned rain generally descends in great abundance, and if the agitation be very violent, it is often accompanied with a fall of hail. The longer the lightning continues, the rarer and lighter in colour the cloud gradually becomes;

Spring, then, these missile fires: for when the cope
Smiles all serene, or but o'ershadow'd light,
Such ne'er we mark; since daily ether first
Blackens throughout, beneath the clustering crowd
So blackens fancy might conceive all hell
Had, with his direst shades, the welkin storm'd,
Shiv'ring with Horror every human nerve,
Ere yet the tempest forge his glittering bolts.

Oft, too, o'er ocean, like a flood of pitch,
Some negro cloud prone rushes from the skies,
Dire leader of the darkness, follow'd close
By hurricanes and thunders, and itself

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till, at length, it breaks in a variety of places, and discloses the blue sky above.

Ver. 257. *So blackens fancy might conceive all hell*
Had, with his direst shades, the welkin storm'd,] The following fearful picture of Milton, is not inapposite in this place:

——such a frown
Each cast at th' other, as when two black clouds,
With heaven's artillery fraught, come rattling on—
To join their dark encounter in mid air.
So frown'd the mighty combatants, that hell
Grew darker at their frown.

Par. Lost, ii. 713.

Ver. 261. ——*like a flood of pitch,*] In the original, ver. 256:

Ut picis——flumen:

a bold and masterly image, which Virgil has almost verbally copied, and applied to the streams of blood with which Turnus was covered in his unequal contest with the Trojans:

——tum toto corpore sudor
Liquitur; et *picem*, nec respirare potestas,
Flumen agit.

Æn. ix. 813.

From every pore he sweats:—a *flood of pitch*
Drowns him, and all his respiration fails.

Ver. 262. *Some negro cloud*——] In the original text, ver. 255:

——*niger* quoque per mare *nimbus*.

So, Ercilla, in his Araucana:

El *negro velo* de la noche escura.

Cant. viii. 80.

The *negro veil* that wraps the night obscure.

For an explanation of the phænomenon referred to, the reader may turn to the Note on ver. 256, above.

Ignibus, ac ventis, cum primis ipse repletus:
In terrâ quoque ut horrescant, ac tecta requirant.
Sic igitur supera nostrum caput esse putandum est
Tempestatem altam: neque enim caligine tantâ
Obruerent terras, nisi inædificata superne
Multa forent multis exempto nubila sole:
Nec tanto possent venientes obprimere imbri,
Flumina abundare ut facerent, camposque natare,
Si non exstructis foret alte nubibus æther.

Heic igitur ventis, atque ignibus, omnia plena
Sunt: ideo passim fremitus, et fulgura, fiunt.
Quippe et enim supra docui, permulta vaporis
Semina habere cavas nubeis; et multa necesse est
Concipere ex solis radiis, ardoreque eorum.
Heic, ubi ventus, eas idem qui cogit in unum
Forte locum quem vis, expressit multa vaporis
Semina, seque simul cum eo conmiscuit igni;
Insinuatus ibei vortex vorsatur in alto,
Et calidis acuit fulmen fornacibus intus.
Nam duplici ratione adcenditur: ipse suâ cum

Ver. 266. *Driving appall'd each mortal to his home.*] So, Virgil, with equal force of imagery:

——quo maxima motu
Terra tremit, fugêre feræ; et mortalia corda
Per gentes humilis stravit pavor. Geo. i. 329.

The beasts are fled; earth rocks from pole to pole,
Fear walks the world, and bows th' astonish'd soul.
Sotheby.

Ver. 270. ——*those headlong torrents that o'erpower*
Oft every stream, and drown the cultur'd plains.] In like manner, Virgil:

At Boreæ de parte trucis cum fulminat, et cum
Eurique Zephyrique tonat domus; omnia plenis
Rura natant fossis, atque omnis navita ponto
Humida vela legit. Georg. i. 370.

With fire surcharg'd, and fierce fermenting air,
Driving appall'd each mortal to his home.
Whence high through ether must the tempest reach,
Pil'd cloud o'er cloud, the sun obstructing deep,
Or ne'er such ten-fold darkness could be rear'd,
Nor rush those headlong torrents that o'erpower
Oft every stream, and drown the cultur'd plains.

These all with fires, with furious airs are fill'd,
Whence spring the flash, and repercussive roar.
For, as we erst have sung, full many a seed
Igneous, the hollow-bosom'd clouds contain,
And many alike absorb they from the sun.
These, when th' aerial tide, expanding still,
Has from the cloud's condensing frame exprest,
And with their fury its own rage combin'd,
Then springs the fiery vortex, and within
Forges profound, and points its deadly darts,
Doubly enkindled, by the boist'rous air

But when keen lightnings flash from Boreas' pole,
And Eurus' house to west, when pealing thunders roll,
The country swims, all delug'd are the dales,
And every pilot furls his humid sails. WARTON.

This, however, is a passage which bears a reference so obvious to the ensuing, of Aratus, that it was hence, perhaps, deduced, if deduced at all, rather than elsewhere:

Αυταρ οτ' εξ [illegible]
Αλλοτι δ' εκ στεροπης, και αλλοτε τ' [illegible]
Δη τοτε τις [illegible]

PATRON.

Then when the flash the South or East inflame,
From North or West, less frequent when it aims,
The pilot from his bark surveys the pole,
Hears the loud roar, and trembles through [illegible] soul.

Mobilitate calescit, et e contagibus ignis.
Inde, ubi percaluit gravius ventosus, et ignis
Inpetus incessit; maturum tum quasi fulmen
Perscindit subito nubem, ferturque, coruscis
Omnia luminibus lustrans loca, percitus ardor:
Quem gravis insequitur sonitus, displosa repente
Obprimere ut cœli videantur templa superne.
Inde tremor terras graviter pertentat, et altum
Murmura percurrunt cœlum; nam tota fere tum
Tempestas concussa tremit, fremitusque moventur:
Quo de concussu sequitur gravis imber, et uber,
Omnis utei videatur in imbrem vortier æther,
Atque ita præcipitans ad diluviem revocare:
Tantus, discidio nubis, ventique procellâ,
Mittitur ardenti sonitus quom provolat ictu.
Est etiam, quom vis extrinsecus incita venti
Incidit in validam maturo a culmine nubem:

Ver. 286. *And down abrupt, with vibratory flash*
Diffus'd o'er all things, flings the missile fate.] The description of a thunder-storm, contained in these, and the eight ensuing verses, is, in the original, tremendous indeed; it has never, to my knowledge, been surpassed, and seldom equalled. Thomson, in painting the same kind of tempest, has imitated our poet with great spirit and excellence; but the imitation is so close, as to be almost a copy:

The lightnings flash a larger curve, and more
The noise astounds: till over head a sheet
Of livid flame discloses wide; then shuts,
And opens wider; shuts, and opens still
Expansive, *wrapping ether in a blaze.*
Follows the loosened aggravated roar,
Enlarging, deepening, mingling; peal on peal
Crushed horrible, convulsing heaven and earth
Down comes a deluge of sonorous hail,
Or *prone descending rain. Wide-rent, the clouds*
Pour a whole flood. Summer, 1136.

Ver. 288. *Roars next the deep-ton'd clangour,——*] It is worth while to compare Polignac's description of the same phænomenon with the verses before us, as exhibiting the Cartesian doctrine upon this subject, deduced from the supposed existence of bituminous, and other combustible substances in the atmosphere, as already observed in the preceding Note on v. 223:

Rapid convolv'd, and touch of fiery seeds:
Then springs, and raves, and ripens, till, at length,
Grown full mature the shackling cloud it cleaves,
And down abrupt, with vibratory flash
Diffus'd o'er all things, flings the missile fate.
Roars next the deep-ton'd clangour, as though heaven
Through all its walls were shatter'd; earth below
Shakes with the mighty shock, from cloud to cloud
Redoubling still through all th' enfuriate vault:
While, loosen'd by the conflict, prone descends
Th' accumulated torrent, broad and deep,
As though all ether into floods were turn'd,
And a new deluge menac'd man and beast.
Such the vast uproar when the red-hot storm
Bursts forth abrupt, and hurls its fiery bolts.
Oft, too, th' external whirlwind, as it flies,
Against the cloud strikes sudden, that within

Haud aliter cœli quondam in regione supremâ
Fit tonitru: dispersa latent nam semina flammæ
Nimbos inter aquâ multoque bitumine fœtos:
Quæ simul ac mediâ glacies in nube coegit,
Aëre densato penitus, vertigine magnâ
Volvuntur; fervens accenditur igne bitumen;
Aëra dilatant ignes; hic frigida claustra
Perrumpit strepitu horrendo; simul intonat æther
Concussus: qua facta via est, sinuosa sagitta
Pervolat, et minimos penetrat subtilis hiatus.
Anti-Lucr. ver. 493.

Thus springs the thunder through the vault of heav'n:
For seeds of flame amidst the clouds high-charg'd
With vapour and bitumen, lurk dispers'd:
Which, when the growing chill, constringing, once
Drives towards the centre of the gathering mass,
Whirl round with mighty vortex: the fixt fire
Inflames the fat bitumen; wide expands
The pent-up air, and bursts with horrid crash
Its icy fetters; ether roars amain
Shook through his mansions; and the dazzling dart
Plies through the heavens, where fractur'd most, its path,
And winds through pores no senses e'er can trace.

Quam quom perscidit, ex templo cadit igneus ille
Vortex, quem patrio vocitamus nomine fulmen.
Hoc fit idem in parteis alias, quoquomque tulit vis.

Fit quoque, ut interdum venti vis, missa sine igni,
Igniscat tamen in spatio, longoque meatu,
Dum venit; amittens in cursu corpora quædam
Grandia, quæ nequeunt pariter penetrare per auras:
Atque alia ex ipso conradens aëre portat
Parvola, quæ faciunt ignem, conmixta, volando.
Non aliâ longe ratione, ac plumbea sæpe
Fervida fit glans in cursu, quom, multa rigoris
Corpora dimittens, ignem concepit in auris.
Fit quoque, ut ipsius plagæ vis excitet ignem,
Frigida quom venti pepulit vis, missa sine igni;
Nimirum, quia quom vehementi perculit ictu,
Confluere ex ipso possunt elementa vaporis:
Et simul ex illâ, quæ tum res excipit ictum:
Ut, lapidem ferro quom cædimus, evolat ignis;
Nec, quod frigida vis ferri est, hoc secius illa
Semina concurrunt calidi fulgoris ad ictum.
Sic igitur quoque res adcendi fulmine debet,
Obportuna fuit si forte, et idonea, flammis.
Nec temere omnino plane vis frigida venti
Esse potest, ex quo tantâ vi missa superne est;

Holds the ripe tempest, and its form divides.
And, hence releas'd, the fiery vortex quick,
The vivid bolt, descends, now here, now there,
In varying path, apportion'd to its strength.
And oft the gass projected, though at first
Void of combustion, in its course inflames,
Rapid and long; forsaking, as it flies,
Its grosser atoms impotent of speed,
And, from th' abraded air, those more minute
Collecting, prompt th' incipient blaze to rouse.
As when, swift-wing'd, the ball of missile lead
Heats, by degrees its gross unkindling parts
Losing, and fires by atoms gain'd from air.
Nor seldom may the stroke itself excite
The dread combustion, as with fury flies,
Void of all flash, the fulminating bolt.
For, from itself, the shock may seeds alike
Igneous elicit, and the substance struck,—
Instant combin'd; as, when with steel we ply
The sparry flint, the spark immediate springs,
Nor lingers sluggish from the steel's cold touch.
So by the bolt each substance struck must flame,
Inflammable if gender'd; nor, though cold
Its elemental air, can hence delay
Once rise, since urg'd so rapid in its flight;

Quin prius, in cursu si non adcenditur igni,
At tepefacta tamen veniat, conmixta calore.
Mobilitas autem fit fulminis, et gravis ictus,
Ac celeri ferme pergunt tibi fulmina lapsu,
Nubibus ipsa quod omnino prius incita se vis
Conligit, et magnum conamen sumit eundi.
Inde, ubi non potuit nubes capere inpetis auctum,
Exprimitur vis; atque ideo volat inpete miro,
Ut validis quæ de tormentis missa feruntur.

Adde, quod e parvis, et lævibus, est elementis;
Nec facile est tali naturæ obsistere quidquam:
Inter enim fugit, ac penetrat, per rara viarum.
Non igitur multis obfensibus in remorando
Hæsitat: hanc ob rem celeri volat inpete labens.
Deinde, quod omnino naturâ pondera deorsum
Omnia nituntur: quom plaga sit addita vero,
Mobilitas duplicatur, et inpetus ille gravescit:
Ut vehementius, et citius, quæquomque morantur,

Ver. 333. ——*as the storm*
Of rocks, and darts, from giant-engines hurl'd.] In the note on Book IV. ver. 924, I have briefly adverted to the astonishing powers exhibited by the ancients in the use of their *catapultæ*, or machines, here referred to. It is not unlikely, however, that Lucretius had his eye immediately directed, in the present instance, to the truly wonderful engines employed about the very time in which he wrote these verses by Mithridates king of Pontus in his attack upon Cyzicum, a city which formed the key of Asia, and was a municipality of the Roman state. Of these engines, the most formidable was a contrivance of Nicomedes of Thessaly: it was named *helepolis*, and

Flight that, if powerless of itself to fire,
Alone, must warm the mischief in its fall.
So speeds th' aerial shaft, its wing so fleet,
So fierce its fell encounter; mid the clouds
So wide its infant forces it collects,
And strives, impatient of restraint, t' escape!
Till, grown mature, the full-distended cloud
Bursts instantaneous, and, with matchless might,
Rushes the rampant meteor, as the storm
Of rocks, and darts, from giant-engines hurl'd.
Then too most light, most subtle are its seeds:
Whence nought can e'er resist it, and, with ease,
Winds it, uncheck'd, through pores minutest trac'd,
Void of delay, and peerless in its speed.

All, too, of weight possess'd, below must tend
E'en from their nature; but when once to weight
Its power propulsion adds, the substance urg'd
In force, in fleetness doubled must descend,
Direct in travel, and more potent far

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was not less than a hundred cubits in height. Upon the summit of this vast machine was planted a tower of prodigious strength, from which *catapultæ* of enormous and irresistible force were kept in constant play, and which so effectually battered the walls, that notwithstanding the active diversion made in its favour by the Consul Lucullus, the city must of necessity have surrendered in a few days, had not a most violent whirlwind suddenly arisen, and overturned the gigantic and complicated structure. The system of mining and counter-mining was, also, during the prosecution of this celebrated siege, had recourse to, and practised with as much spirit by the medium of such combustibles as were at hand, as if the invention of gun-powder and the art of modern fortification had been familiar to the antagonist parties.

Obvia discutiat plagis, itinerque sequatur.
Denique, quod longo venit impete, sumere debet
Mobilitatem, etiam atque etiam quæ crescit eundo,
Et validas auget vireis, et roborat ictum.
Nam facit, ut, quæ sint illius semina quomque,
E regione locum quasi in unum cuncta ferantur,
Omnia coniciens in eum volventia cursum.
Forsitan ex ipso veniens trahat aëre quædam
Corpora, quæ plagis incendunt mobilitatem:
Incolomeisque venit per res, atque integra transit
Multa, foraminibus liquidus quia transviat ignis.
Multaque perfregit, quom corpora fulminis ipsa
Corporibus rerum inciderint, quâ texta tenentur.

Dissolvit porro facile æs, aurumque repente

Ver. 345. *Where long the flight, moreo'er, the substance wing'd*
Augments in haste, and swift, and swifter still]
Not dissimilar to Virgil's description of fame:

Mobilitate viget, viresque acquirit eundo.
Æn. iv. 175.

Swift from the first, "still" every moment brings
New vigour to her flight, new pinions to her wings. Dryden.

The position here advanced by our poet, with respect to descending bodies, is as true to the modern theory of gravitation, as it was to the Epicurean hypothesis; for although bodies, urged in a horizontal or ascending direction, instead of "augmenting in haste," must necessarily proceed with a pace progressively slower, not only from the resistance of the atmosphere, but from the power of gravitation itself acting in opposition to their course; yet, in a descending path, they must necessarily increase in speed, from the addition of this very power to the original cause of their propulsion; a power perpetually increasing in strength in proportion to its proximity to the great mass of the earth, in whose aggregate bulk it resides.

Ver. 348. *For seed with seed condenses as they rush,*
Press'd to one central focus,—] De Coutures did not understand our poet's meaning: "L'agilité," says he, "avec laquelle il s'echape conserve l'union de ces semences, quelques opposées qu'elles soient, et les forçant de rouler dans l'effort de sa course, elles

Borne tow'rds the spot that feels its final brunt.
Where long the flight, moreo'er, the substance wing'd
Augments in haste, and swift, and swifter still
Flows ever on, and sturdier strikes its blow:
For seed with seed condenses as they rush,
Press'd to one central focus, till, at length,
Falls with full force th' agglomerated shock:
Join'd, too, perchance, by atoms drawn from air
Whose ceaseless lash gave pinions to its speed.
Then many a frame the missile bolt pervades,
And leaves unhurt, its pores the liquid fire
Transpiercing unresisted; while, revers'd,
Full many a frame it shatters, since the seeds
Igneous with those th' objective mark that rear,
And stamp it solid, in close conflict meet.
Thus brass with ease, thus, instantaneous, gold

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arrivent au memê lieu que lui sans s'etre ecartées." The whole of our poet's argument is, that the different particles of this subtle gass become gradually more concentrated, and consequently more powerful, in the course of their passage, from the perpetual pressure of the elastic medium through which they pass.

Ver. 354. ——*its pores the liquid fire*
Transpiercing unresisted;——] "Liquid fire" is a phrase peculiarly elegant: it has been already employed by Lucretius, in ver. 207, of the present Book; and has not unfrequently been copied from him by posterior writers, of which some instances are given in the Note affixed to the above verse. I have here followed Mr. Wakefield, in preferring the lection of the ancient manuscript copy of our poet preserved in the Leyden university:

——foraminibus *liquidus* quia transviat ignis:

for, in all the common editions, *liquidus* is converted into *liquidis*, and of course applies to *foraminibus* instead of *ignis*. Marchetti has followed the general reading:

——oltre volando
Per lor liquidi fori.

Nothing, however, can be more palpably erroneous or inconsistent with the general argument.

Confervefacit; e parvis quia facta minute
Corporibus vis est, et lævibus ex elementis,
Quæ facile insinuantur; et, insinuata, repente
Dissolvunt nodos omneis, et vincla relaxant.
Auctumnoque magis, stellis fulgentibus apta,
Concutitur cœli domus undique, totaque tellus;
Et, quom tempora se veris florentia pandunt:
Frigore enim desunt ignes, venteique calore
Deficiunt, neque sunt tam denso corpore nubes.
Inter utrasque igitur quom cœli tempora constant,
Tum variæ caussæ concurrunt fulminis omnes.
Nam fretus ipse anni permiscet frigus, et æstum;
Quorum utrumque opus est fabricanda ad fulmina nobis,

Ver. 363. ——*when spring expands*
Her flowery carpet,——] In the original, thus, ver. 358:

——quom tempora se veris florentia pandunt.

To this style of delineating the beauties of spring, no poets, perhaps, are more attached than those of Spain: a thousand instances might be selected from most of them. I shall only offer the following, however, from the gallant Garcilazo de la Vega, as a specimen of the rest:

Qual suele accompanada de su bando
A paracer la dulce Primavera,
Quando Favonio y Zefiro soplando,
Al campo tornan su beldad Primera,
Y van artificiosos esmaltando.
De roxo, azul, y blanco la ribera:
En tal manera à mi Florida mia
Viniendo revedece mi alegria.

As with his light and airy train
The gentle Spring begins his reign
When Zephyr and Favonius first
O'er the green meads, benignant, burst
And round the central verdure strew
Borders of scarlet, white and blue:
Such, when my Flora deigns t' appear,
The gay delights my soul that cheer.

Yet, in pictures of this kind, the Arabians and Persians are, perhaps, unrivalled. The following, from the Abi'lola, as given by Reiski, may serve as an example:

قد اتاك الربيع يفعل صا
تا ٔمر فعل عبدك اما ٔمور*
وكسي الارض خد مة لك يامولاه
دون الملوك خضر الحرير*

Melt its light seeds, its principles minute
Deep-winding sinuous, and, when wound, at once
Bursting each bond, and solving the stern mass.

But chief in autumn, and when spring expands
Her flow'ry carpet, earth with thunder shakes,
And heaven's high arch with trembling stars inlay'd.
For few the fires that warm the wintry months,
And soft the gales of summer, nor so dense
Throng then the gathering clouds; but, 'twixt the two
When roll the zodiac-lustres, every cause
Concentrates close the clamorous storm demands;
The frith of time then reach'd that heat and cold
Blends, whose joint power alone the flash creates,

وهي تختال في زيّ جدة
خضر تعدي بلؤلؤ صنثور*
وغدت كل ربوة نشتهي
الرقص بثوب من النبات قصير*.

Lo! at thy bidding, Spring appears,
Thy slave ambitious to be seen;
Lord of the world, thy voice she hears,
And robes th' exulting earth in green:
And from her mantle's radiant hems
Drops pearls, drops emeralds as she winds.
The milk-maid crops the heav'nly gems,
And round her tuckt-up kirtle binds.

Ver. 371. *The frith of time then reach'd that heat and cold*
Blends,——] In the original, thus:

Nam fretus ipse anni permiscet frigus at æstum.
Ver. 363.

"Pointedly and elegantly," as Mr. Wakefield expresses himself upon this passage: for "in the midst of these *uncertain months*," to adopt the words of Virgil, "*the air fluctuates*, and becomes irritated by conflicting tempests."—

Hence our poet, in his inimitable description of Autumn, Book V. 760:

——Autumn then
Follows, and tipsy Bacchus, arm in arm,
And storms and tempests: Eurus roars amain,
And the red South brews thunders.

Marchetti has happily translated this verse of Lucretius:

Che lo stretto dell' anno insieme mesce
Co'l freddo il caldo.

Ut discordia sit rerum, magnoque tumultu
Ignibus et ventis furibundus fluctuet aër.
Prima caloris enim pars, et postrema rigoris,
Tempus id est vernum: quâ re pugnare necesse est
Dissimileis inter sese, turbareque, mixtas.
Et calor extremus primo cum frigore mixtus
Volvitur, auctumni quod fertur nomine tempus:
Heic quoque confligunt hyemes æstatibus acres.
Propterea, sunt hæc bella anni nominitanda;
Nec mirum est, in eo si tempore plurima fiunt
Fulmina, tempestasque cietur turbida cœlo,
Ancipiti quoniam bello turbatur utrimque,
Hinc flammis, illinc ventis, humoreque mixto.
Hoc est igniferi naturam fulminis ipsam
Perspicere, et, quâ vi faciat rem quamque, videre:
Non, Tyrrhena retro volventem carmina frustra,
Indicia obcultæ divôm perquirere menti;
Unde volans ignis pervenerit, aut in utram se

Ver. 387. ——*from thy hands*
Hurling the TUSCAN *legends*——] I have already observed, in Note on ver. 89, of the present Book, that the science of divination by celestial meteors, was derived from the Tuscans. According to Diodorus Siculus, vi. 29. these people devoted themselves almost entirely to the investigation of natural events, and the subject of theology. They appear to have combined much superstitious credulity, with a considerable thirst after knowledge, and hence their extravagances upon the subject of thunder and lightning are not much to be wondered at. The poets, however, indulge us with a different history of the mode by which they became possest of such superior powers of divination. It was taught them, say they, by a philosopher of preternatural birth, whose name was Tages; and who started suddenly out of the earth, and appeared to a countryman as he was ploughing the Tarquinian field. According to Cicero, who relates this story in lib. ii. de Divinat. this philosophic son of the earth had the appearance of a youth, but the mental intelligence of a man in

The reign of discord, and the rage of air
Tumultuous torn 'twixt winds and rival fires.
For heat's first rise, and cold's ulterior verge
Rear the young spring; whence things with things diverse
Must meet, and, meeting, into wrath ferment:
While cold's first chills, and heat's last ling'ring beams,
Mutual convolv'd, create th' autumnal times,
Still summer striving with stern winter's rage.
Whence spring, whence autumn claim alike the term
Of Warrior-Seasons, thus to fight attach'd.
Nor wond'rous, then, that thunders here should rise,
And storms defile the concave, by the war
Doubtful, disturb'd, of whirlwind, rain, and fire.

Hence may'st thou clear the thunder's essence trace,
And its vast force develope; from thy hands
Hurling the Tuscan legends that pretend
Vainly each purpose of the gods t' unfold,
And thus decide whence flows this winged fire:

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years. The peasant, dismayed at the apparition, shrieked out so loudly, that all the country of Etruria flocked to his assistance. The philosopher addressed himself to the astonished multitude, and taught them the doctrine of divination, the principles of which many of them wrote down upon paper-bark while he was instructing them. Hence, the books of the Tuscans are occasionally styled Tagetic oracles. To this miraculous personage, Ovid alludes, in the following verses:

——cum Tyrrhenus arator
Fatalem glebam mediis aspexit in arvis
Sponte suâ primum, nulloque agitante, moveri;
Sumere mox hominis, terræque amittere formam;
Oraque venturis aperire recentia fatis:
Indigenæ dixêre Tagen, qui primus Etruscam
Edocuit gentem casus aperire futuros.

Metam. xv. 553.

The Tuscan ploughman, mid the fields, survey'd
The fatal glebe, untouch'd, spontaneous move,
Drop the gross clod, and soften into man;
And from his new lips future scenes predict.
Tages the natives call'd him, and affirm
He first the Tuscans taught the fates t' unfold

Vorterit hic partim, quo pacto per loca sæpta
Insinuarit, et hinc dominatus ut extulerit se;
Quidve nocere queat de cœlo fulminis ictus.
Quod, si Jupiter, atque aliei fulgentia divei
Terrifico quatiunt sonitu cœlestia templa,
Et jaciunt ignem, quâ quoique est quomque voluntas;
Quur, quibus incautum scelus avorsabile quomque est,
Non faciunt, ictei flammas ut fulguris halent
Pectore perfixo, documen mortalibus acre?
Et potius, nullâ sibi turpi conscius in re,
Vovitur in flammis innoxius, inque peditur,
Turbine cœlesti subito conreptus, et igni?
Quur etiam loca sola petunt, frustraque laborant?
An tum brachia consuescunt, firmantque lacertos?
In terrâque Patris quur telum perpetiuntur
Obtundi? quur ipse sinit, neque parcit in hosteis?

Ver. 390. ——*whence flows this winged fire;*] This and the ensuing verses are repeated from v. 89. of the Book before us.

Ver. 394. ——Jove's *associates*,——] Jupiter, according to the Tuscan legends, was lord paramount of the thunder; but he delegated his power of employing it, and darting it upon the earth, to nine other deities. Hence Arnobius, p. 122. Diis novem Jupiter potestatem jaciendi sui fulminis permisit. "Jupiter gave to nine of the gods the power of hurling his thunder-bolts." See also Plin. Nat. Hist. ii. 52.

Ver. 397. *Why 'scapes the guilty from its vengeful stroke,*] To the same effect, Aristophanes, in his comedy of the Clouds:

Τολμω κατειπειν μηποτ' ουκ εισιν θεοι·
Κακοι γαρ ευτυχουντες επιπλητουσι με.

I dare affirm no gods the world control,
Since villains prosper and torment my soul.

And Seneca has written an entire treatise on the question, Cur malis bene et bonis male, cum sit providentia? "Why is good allotted to the evil, and evil to the good, since there is a providence?" Our poet, however, is not attacking the doctrine of a

Where speeds its fury; by what means empower'd
To pierce through walls, and then, triumphant, die;
Or what portends its brandish when display'd.
For if from Jove, or Jove's associates, flow
The roar tremendous, shatt'ring heaven's high arch;
If these, at will, the flaming bolt direct,—
Why 'scapes the guilty from its vengeful stroke,
Nor falls, transpierc'd, a monument to man?
Or, rather, why, beneath the fiery storm,
Sinks he unconscious of committed crime,
Void of all blame, yet victim to its ire?

Why seek the gods, too, solitary scenes
And labour fruitless? need they, then, essay
Their wontless arms, and nerve them for the fight?
Why thus their sire's tremendous wrath exhaust
O'er the bare ground? or why himself permit,
Nor, for his foes, the fiery bolt restrain?

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providence, which, as I have already had various occasions of noticing, was admitted into the Epicurean creed, but merely the absurd and superstitious pretensions of the Tuscan augurs.

Ver. 399. *Or, rather, why, beneath the fiery storm, Sinks he unconscious of committed crime,*] I have already had occasion to observe how attentively Thomson has perused our poet's full and masterly description of the thunder-storm, and how happily he had imitated its lineaments: he has not been less attentive to the observations contained in the passage now before us, with which the description closes: and there can be no doubt, I think, that he drew his first hint for the elegant and pathetic episode with which he closes his own history of this tremendous phænomenon, from this very source. The commencement of it, indeed, is almost sufficient to establish its origin:

> Guilt hears appall'd, with deeply-troubled thought:
> *And yet not always on the guilty head*
> *Descends the fated flash.*
>
> Summer, 1169.

Denique, quur numquam cœlo jacit undique puro
Jupiter in terras fulmen, sonitusque profundit?
An, simul ac nubes subcessere, ipsus in æstum
Descendit, prope ut hinc teli determinet ictus?
In mare quâ porro mittit ratione? Quid undas
Arguit, et liquidam molem, camposque natanteis?

Præterea, si volt caveamus fulminis ictum,
Quur dubitat facere, ut possimus cernere missum?
Si nec opinanteis autem volt obprimere igni,
Quur tonat ex illâ parte, ut vitare queamus?
Quur tenebras ante, et fremitus, et murmura, concit?
Et simul in multas parteis quî credere possis
Mittere? An hocc' ausis numquam contendere factum,
Ut fierent ictus uno sub tempore plures?
At sæpe est numero factum, fierique necesse est,
Ut pluere in multis regionibus, et cadere imbreis,
Fulmina sic uno fieri sub tempore multa.

Ver. 408. *Why waves the god, moreo'er, the serpent-flash,*
Why rolls the thunder ne'er in cloudless skies?] The *serpent-flash* of lightning has undoubtedly been exhibited occasionally, in a sky perfectly destitute of clouds; for the electric ether, as is well known, will corruscate in a Torricellian vacuum; but this is by no means common, and the *thunder-peal* demands at all times the existence of clouds. To the harmless lightning that occasionally appears in a clear, serene sky, Lucan, with an accurate observation of nature, adverts in his Pharsalia, and, in consequence of its being succeeded by no intonation or clap, has denominated it dumb or silent:

Emicuit cœlo *tacitum* sine nubibus ullis
Fulmen. Lib. i.

The *dumb* flash glitter'd mid the cloudless skies.

But the constant accompaniment of clouds, in the case of thunder, as here contended for by our poet,

Why waves the god, moreo'er, the serpent-flash,
Why rolls the thunder ne'er in cloudless skies?
When throng the gathering clouds, adown the storm
Descends he first, that, from a nearer point,
With surer aim, his javelin he may dart?
Yet why attack the ocean? o'er the waves
Waste his wild ire, the floods, and liquid fields?
If, too, he mean mankind the bolt should miss
Why form its structure viewless to the sight?
While, if he hope to strike us unprepar'd,
Why flash, conspicuous, and invite escape?
Why first fill heaven with groans and darkness dire?—
Then, canst thou deem him competent at once
Through various points to thunder? or the fact
Dar'st thou deny that many a fatal bolt
Falls at the same dread moment? while the year,
Ceaseless, such fact renews, and proves precise
That as the shower at once o'er many a scene
Rushes amain, so darts th' etherial shaft.

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is, with equal warmth, maintained by Aristotle, whose words are cited by Lambinus on the present occasion, de Meteor. ii. 9. και δια τι ποτε τουτο γιγνεται κατα τον ουρανον, ὁτ αν ετησιφιλον ᾖ μονον, αλλ' ουχι συνιχως ὑντως· αιθριας δ' ουσης, ου γιγνεται.

Ver. 413. *Yet why attack the ocean? o'er the waves*] Thus, Cicero, in almost the identic words of our poet, de Divinat. ii. Quid enim proficit cum in medium mare fulmen jacit Jupiter? quid cum in altissimos montes? quod plerumque fit. Quid cum in desertas solitudines? quid cum in earum gentium oras, in quibus hæc ne observantur quidem? "What profit does Jupiter propose to himself when *he darts his thunder down upon the midst of the ocean? What, when upon the loftiest mountains, where it chiefly descends?* (See v. 432.) *What, when upon solitary deserts?* (v. 402.) What, when upon those distant shores where, indeed, it can never be perceived?"

Postremo, quur sancta deûm delubra, suasque
Discutit infesto præclaras fulmine sedes;
Et bene facta deûm frangit simulacra, suisque
Demit imaginibus violento volnere honorem?
Altaque quur plerumque petit loca; plurima quo plus
Montibus in summis vestigia cernimus ignis?

Quod super est, facul est ex hiis cognoscere rebus,
Πρηστηρας Graiei quos ab re nominitarunt,

Ver. 433. ——*and mountains most sublime?*] Thus Horace:

Decidunt turres, feriuntque summos
Fulmina montes.
Od. ii. 10.

Down falls the tower beneath the fatal flash,
The mountains hear, and tremble at the crash.

Ver. 434. *Hence, with much ease, the meteor may we trace,*
Term'd, from its essence, Prester *by the* Greeks,] Having discussed the phænomenon of thunder and lightning, he now proceeds to consider those of the water-spout, and the hurricane: and it is truly curious to observe how minutely he concurs with the philosophy of the present day, in regarding them as meteors of a similar nature and origin. *Prester*, indeed, as our poet informs us, is a Greek word signifying a fiery or inflammatory intumescence; and such, he asserts, is the essence of which this meteor (the *water-spout*) consists: whence it is obvious, that the term *ventus*, or *wind*, applied to it immediately afterwards, is employed generically, to express an elastic gass or ether, for which Lucretius found no definite expression in his own language, rather than the nature of wind properly so called. It is an igneous or fiery aura, not indeed in the open act of combustion, but composed of the finest and most minute particles of a peculiar species of elementary fire, which, in a more concentrated form, would necessarily become luminous and escharotic.

Gassendi, indeed, contends, that the Epicurean prester is not an igneous meteor, but a mere vortex of elastic air. But there can be no doubt of his being mistaken; for Lucretius not only employs a term to which fire, in some modification or other, either elementary or combined, is necessarily attached, but refers us, in the opening of the discussion, by way of explanation, to the constituent particles of lightning, which, he expressly declares, consist of the very finest and most attenuate fiery atoms.

Fiery, too, and of the common essence of lightning is this meteor asserted to be, by the philosophy of the present day. For it is regarded as an electrical phænomenon; as, indeed, is almost every atmospherical meteor, as well as a great variety that are subterraneous. In describing the powers and operation of the thunder-cloud in Note on v. 256. above, I have noticed its wonderful faculty of attracting, with almost instantaneous speed, the lighter and adscititious clouds in its vicinity, as I have also its submission to the still more strongly attractive power of that part of the earth which lies immediately beneath it, in a state of negative electricity, evidenced by its dipping downwards either in ragged and multiform fragments, or, where the film of the

And why, moreo'er, the temples of the gods,
Why his own altars, with the fiery storm
Fells he, promiscuous? into atoms why
Rends their best statues; and, with frantic aim,
E'en from himself his image-honours wrest?
Or o'er the hills why hurls he chief his ire,
The rocks abrupt, and mountains most sublime?
Hence, with much ease, the meteor may we trace
Term'd, from its essence, Prester by the Greeks,

cloud is tenser, in more regular and unbroken protuberances. Retaining, then, these simple facts in our recollection, it will not be difficult to account for the phænomenon of the prester, or water-spout, upon the principles of the electric theory.

A thunder-cloud, or cloud filled with electric matter, is first noticed to appear at sea in a sky so serene as to be totally destitute of adscititious clouds, and in an atmosphere so dry, as to be possest of very little impalpable vapour. Such is the general appearance of the horizon on the commencement of the water-spout. In such a situation, a thunder-storm cannot be the result, for want of the confederate assistance of additional clouds and vapours: but, from the circumstances enumerated above, a very considerable portion of mutual attraction must take place between this isolated cloud, and the portion of the sea immediately beneath it, more especially if the sea be at this time negatively electrified, or destitute of the electric power of which the cloud has a vast surplus. From this mutual attraction, the water directly under the cloud will become protuberant upwards, rising like a hill towards the cloud above, which, in the phænomenon we are now describing, it always does, and the cloud above will become protuberant downwards, elongating itself towards the elevated portion of water beneath. If, in this action of straining, the texture of the cloud be very slight, it will burst into a thousand fragments, and the electric matter contained within it will be quietly dissipated, or attracted to the ocean; but if it be stronger and more viscous, it will continue to stretch without bursting; and, like every other elastic substance, the more it stretches, the narrower will be the projected tube. Such, to the mariner, is the actual appearance of the column of the water-spout, precisely resembling a speaking-trumpet, with its base or broader part uppermost. When the mouth of this projected tube touches the rising hillock of water, if the attraction of the negatively electrified ocean be superior, the electric aura, we may naturally suppose, will be drawn downwards, and the empty cloud be totally dissipated; but, as will generally occur in the case of a positive force applied to a negative, if the attraction of the electric cloud prove victorious, it will continue to suck up the rising hillock of water till it is altogether sated, and can hold no more. At this time, the cloud must necessarily burst from its own weight and distention, and, in proportion to its size, and the deluge of water and electricity it discharges, will be the mischief produced. It is said, that it may occasionally be rent, at a distance, by making a violent noise, on board the ship in which it is perceived, by files, saws, or other discordant instruments; and, certainly, whatever will tend to agitate the air, in any considerable degree, affords some prospect of breaking the cloudy film, and thus dispersing the

In mare quâ missei veniant ratione superne.
Nam fit, ut interdum, tamquam demissa columna,
In mare de cœlo descendant; quam freta circum
Fervescunt, graviter spirantibus incita flabris:
Et, quæquomque in eo tum sunt deprensa tumultu,
Navigia in summum veniunt vexata periclum.
Hoc fit, ubi interdum non quit vis incita venti
Rumpere, quam cepit, nubem; sed deprimit, ut sit
In mare de cœlo tamquam demissa columna
Paullatim; quasi quid pugno brachiique superne
Conjectu trudatur, et extendatur in undas:
Quam quom discidit, hinc prorumpitur in mare venti

---

meteor: but the more ordinary method of shooting at it from guns of a large calibre, gives a much stronger, and, indeed, almost certain chance of success; for no mechanical power can agitate the surrounding atmosphere by any means so forcibly as the report of a large cannon: and if it be loaded with ball, it will give a double prospect of discharging the contents of this tremendous spectacle.

Ver. 450. *Forth flows it, fiery, o'er the main, and high*] Thus Thomson, speaking of the same meteor:

——down at once
Precipitant, descends a mingled mass
Of roaring winds, and flame, and rushing flood.
Summer, 994.

In the Purgatorio of Dante, we meet with a more minute copy towards the close of the fifth canto, beginning

——come nell' aer si racoglie
Quello humido vapor che in acqua riede
Tosto che sale, dove il freddo il coglie, &c.

But the most direct imitation of our own poet's description of this meteor is by Camoens, in the following exquisite stanzas:

Eu o vi certamente (e nam presumo
Que a vista me enganava) levantarse,
No ar hum vaporzinho e sutil fumo
E do vento trazido, rodearse:
De aqui levado hum cano ao polo sumo
Se via tam delgado que enxergarse
Dos olhos facilmente nam podia,
Da materia das nuvens parescia.

That oft from heaven wide hovers o'er the deep.
Like a vast column, gradual from the skies, .
Prone o'er the waves, descends it; the vext tide
Boiling amain beneath its mighty whirl,
And with destruction sure the stoutest ship
Threat'ning that dares the boist'rous scene approach.
Thus solve th' appearance; that the maniac wind,
In cloud tempestuous pent, when unempower'd
To burst its bondage, oft the cloud itself
Stretches cylindric, like a spiral tube
From heaven forc'd gradual downwards to the deep;
As though some viewless hand, its frame transpierc'd,
With outspread palm had thrust it from above.
This, when, at length, the captiv'd tempest rends,
Forth flows it, fiery, o'er the main, and high

Hiase pouco e pouco acrescentando
E mais que hum largo masto se engrossava.
Aqui se estreita, aqui se alarga, quando
Os golpes grandes de agoa em si chupava:
Estavase co as ondas ondeando
En cima delle hũa navem se espessava,
Fazendoze mayor mais carregada
Co' o cargo grande da agoa em si tomada.

Qual roxa sanguesuga se veria
Nos beiços da alimaria que imprudente,
Bebendo a recolheo na fonte fria,
Fartar co' o sangue alheo a sede ardente,
Chupando mais e mais se engrossa, e cria
Ali se enche, e se alarga grandemente,
Tal a grande coluna, enchendo aumenta
A si ed a nuvem negra que sustenta.

Cant. V. 19.

And oft, while wonder fill'd my breast, my eyes
To heav'n have seen the wat'ry columns rise:
Slender at first the subtle fume appears,
And, writhing round and round, its volume rears:
Thick as a mast the vapour swells its size,
A curling whirlwind lifts it to the skies.
The tube now straitens, now in width extends,
And in a hov'ring cloud its summit ends.
Still, gulp on gulp, it sucks the rising tide;
And now the cloud, with cumbrous weight supplied,
Full-gorg'd and black'ning, spreads and moves more slow,
And, waving, trembles to the waves below.
Thus when, to shun the summer's sultry beam,
The thirsty heifer seeks the cooling stream,

Vis, et fervorem mirum concinnat in undis.
Vorsabundus enim turbo descendit, et illam
Deducit pariter lento cum corpore nubem:
Quam simul ac gravidam detrudit ad æquora ponti,
Ille in aquam subito totum se inmittit, et omne
Excitat ingenti sonitu mare, fervere cogens.

Fit quoque, ut involvat venti se nubibus ipse
Vortex, conradens ex aëre semina nubis;
Et quasi demissum cœlo prestera imitetur.
Heic, ubi se in terras demisit dissoluitque,
Turbinis inmanem vim provomit, atque procellat.
Sed, quia fit raro omnino, monteisque necesse est
Obficere in terris; adparet crebrius idem
Prospectu maris in magno, cœloque patenti.

The eager horse-leech, fixing on her lips,
Her blood, with ardent throat, insatiate sips,
Till the gorg'd glutton, swell'd beyond her size,
Drops from her wounded hold, and, bursting, dies.
So bursts the cloud, o'erloaded with its freight,
And the dash'd ocean staggers with the weight.
Mickle.

Ver. 452. *For, as the cone descends, from every point*
A dread tornado lashes it without,] The agitation excited in the water by the attractive power of the electrified cloud is not confined to the water alone, but equally extends to the surrounding air through which the conic tube forces its passage: hence the truth of our poet's observation, who has described the phænomenon with an accuracy that leaves nothing to be wished for. He has not had the good fortune, however, to be comprehended aright by his translators, and they have, in consequence, uniformly interpreted him wrong.

Ver. 461. *Mimics the prester, length'ning slow from heaven;*
Till, earth attain'd, &c.——] He here alludes to meteors of a similar description, but not quite so tremendous in their effect: and is generally supposed to refer to the hurricane, or, as the Greeks termed it, τυφων: which is equally an electrical phænomenon, and may be regarded as a prester occurring on land, and consequently as an electric cloud filled with elastic air only, or other vapours received from

Boils from its base th' exaggerated tide.
For, as the cone descends, from every point
A dread tornado lashes it without,
In gyre perpetual, through its total fall:
Till, ocean gain'd, the congregated storm
Gives its full fury to th' uplifted waves,
Tortur'd, and torn, loud howling midst the fray.
Oft, too, the whirlwind from the clouds around
Fritters some fragments, and itself involves
Deep in a cloudy pellicle, and close
Mimics the prester, length'ning slow from heaven;
Till, earth attain'd, th' involving web abrupt
Bursts, and the whirlwind vomits and the storm.
Yet, as on earth the mountains' pointed tops
Break off the texture, tubes like these, at land
Far rarer form than o'er the marble main.

---

the atmosphere, and not often with water. It is produced in the same manner as the sea-prester, has the same kind of elongated tube reaching towards the negatively electrified portion of the earth by which it is attracted, and is accompanied, previous to its bursting, by a similar tornado of external air. This elongated tube, as well as the substance of the cloud itself, in the time of Shakspeare, was supposed to have its film or fibres condensed and rendered firmer by the operation of the rays of the sun; but there is no necessity for such an idea:

——the dreadful spout
Which shipmen do the hurricano call,
Constring'd in mass by the almighty sun.

Troilus and Cressida.

Ver. 465. ——*tubes like these, at land*
Far rarer form than o'er the marble main.]
Our poet here intimates, that this kind of dry prester, or air-spout, occurs occasionally at sea, as well as the moist prester, or water spout: and that he is as correct in this assertion, as in any other, we know from the conjoint testimony of navigators, who have often fired at and destroyed the meteor between them, without its discharging any aqueous fluid whatever. We may account for the phænomenon either in this manner: that the thirsty cloud, in consequence of a more elevated position than ordinary in the atmosphere, at the time it commences its attraction with the water below, satiates and distends itself, by means of its proboscis, with absorbed air alone, prior to the actual contact of such proboscis with the

Nubila concrescunt, ubi corpora multa volando,
Hoc super in cœli spatio, coiere repente
Asperiora; modis quæ possint indupedita
Exiguis tamen inter se conpressa teneri.
Hæc faciunt primum parvas consistere nubeis:
Inde ea conprendunt inter se, conque gregantur,
Et conjungundo crescunt, ventisque feruntur

---

hillock of rising water; so that, by the time this elongating spout extends to the attracted hillock, it is totally incapable of containing any thing farther.

Ver. 466. —*marble main.*] The elegant epithet, introduced into this verse, representative at once of the ocean as to splendour of polish and whiteness of foam, is not unfrequent with our poet. Thus, Book II. 766:

——mare, cum magni commôrant æquora venti,
Vertitur in canos *candenti marmore* fluctus.

Nor has this beauty been neglected by our English poets. Hence, Dyer:

——the flat sea shines like yellow gold
Fused in the fire; or like *the marble floor*
Of some old temple wide. But where so wide
In old or later time, its *marble floor*
Did ever temple boast as this, which here
Spreads its *bright level* many a league around?
Fleece, iv.

And thus Milton, bolder still:

Round he surveys——
——and winds with ease
Through the *pure marble air* his oblique way.
Par. Lost, iii. 564.

Ver. 467. *The rise of clouds next calls us.*——] Our poet's explanation of this phænomenon of natural history does not essentially deviate from the doctrine of modern philosophy upon the same subject.—Clouds, he tells us, are a congeries of various subtle and attenuate bodies, loosely scattered through the atmosphere; as water, air, and the igneous aura of lightning. Their substance, however, is principally aqueous vapour; and this vapour, he affirms, is exhaled indiscriminately from the summits of lofty mountains, from the surface of rivers, seas, and even the general bosom of the earth itself: while it occasionally happens, that the incipient cloudlets arrest, in their descent, immense multitudes of those primal atoms of matter that are perpetually urged from world to world through all the abyss of space, and enter this visible sphere of things through the porous confines of the horizon, for the purpose of sustaining it with fresh pabulum; consistently with the doctrine advanced in the first two Books of the poem. And hence the poet accounts for that abrupt appearance of enormous clouds of excessive depth and pitchy blackness with which the atmosphere is frequently loaded. These aqueous vapours ascending from the earth, are at first too attenuate to be visible; but as they mount into a cooler region, every distinct vesicle becomes condensed, vast multitudes of them congregate, and a larger vesicle or cloudy film of irregular shape is immediately engendered perceptible to the eye. From the junction of such aqueous films in every direction, superior, inferior, and horizontal, a perfect cloud is completed, whose magnitude depends upon the adscititious nebulæ or cloudlets it is capable of absorbing into its own vortex, or the quantity of uncondensed and invisible vapours that lie within the sphere of its attraction of cohesion. Upon the colours assumed by the clouds, I have already cursorily observed, in Note on the present Book, ver. 210. and perhaps the best treatise upon the subject for further

The rise of clouds next calls us. When in heaven
Meet various bodies subtile and sublim'd,
Of jagged figure, instant they cohere;
Not strong the junction but cohesive still.
Thus spring the lighter clouds; and these conjoin'd,
Comprest, condens'd, and congregated close,
Urg'd by the winds, to boundless bulk augment,

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information is Professor Venturi's "Indagine Fisica su i Colori," published at Modena, 1800.

It has been a matter of great contest among philosophers, by what means water, which is nearly nine hundred times heavier than air, can be rendered capable of ascending into the aerial regions. Des Cartes accounted for it by supposing that, by the action of solar heat upon a sheet of water, its superficial particles are formed into little hollow spheres, and become filled with the materia subtilis of space, an attenuate substance not unlike the primal atoms of Lucretius, and which, as I have just observed, the latter conceived to be frequently employed as agents in the formation of clouds. The particles of water, thus filled, must necessarily, it was added, from the superior levity of the substance they envelop, ascend through the ambient air till they attain their proper level. The theory of Dr. Halley was not very different, varying alone in the supposition, that the detached and ascending vesicles of water were impregnated with highly rarefied air, instead of the subtle ether of Des Cartes. But the hypothesis now generally admitted is that of solution, first of all advanced by the abbé Nollet, in his "Leçons de Physique Experimentale." Water and air, it is contended, have a mutual power of dissolving each other; and air is not more frequently extricated from the former, than water is from the latter. The lower part of the atmosphere being pressed, then, by the weight of the incumbent column on the surface of the water, and perpetually rubbing against it, attracts and dissolves those particles with which it is in contact, and separates them from the rest of the water. The aqueous particles, thus detached and absorbed by the lower column of air, are next still more forcibly attracted by the superior, in consequence, both of its being drier, and possessing ampler pores to receive the dissolved vapour. When the aqueous particles attain a certain degree of elevation, the coldness of the atmosphere condenses them, and they coalesce into particles of a larger diameter, and gradually produce the phænomenon of a *cloud*. When the particles, of which such cloud consists, are more closely compacted, either by the mutual attraction of cohesion, or the external pressure of the wind against it, they run into drops sufficiently ponderous to descend in the form of *rain*. If the cloud become frozen by any sudden current of cold air, before its particles be formed into drops, small fragments of them being condensed, and consequently increased in weight, will detach themselves from the general mass, and fall down in thin flakes of *snow*. If its particles have coalesced into drops prior to its being frozen, these drops will then descend in the form of *hail*-stones. And when the lower air is replete with aqueous vapour dissolved in its pores, and a sudden current of cold wind brushes through it, producing the natural frigidity of the superior atmosphere, a *mist* or *fog*, which is only a kind of inferior cloud, is immediately created, and as suddenly, again, dispersed on the return of the natural warmth of the air, which then re-dissolves, to invisible minuteness, the vapoury particles. In like manner, *dew* drops may be regarded as a species of inferior rain, the cold, attacking the dissolved vapours of the lower atmosphere, being either more intense than in the case of fogs, or continued for a greater length of time

Usque adeo, donec tempestas sæva coorta est.
Fit quoque, utei montis vicina cacumina cœlo
Quam sint quoique magis, tanto magis edita fument
Adsidue fulvæ nubis caligine crassâ:
Propterea, quia, quom consistunt nubila primum,
Ante videre oculei quam possint tenuia, ventei
Portantes cogunt ad summa cacumina montis.
Heic demum fit, utei, turbâ majore coortâ,
Et condensa atque arta adparere, et simul ipso
Vortice de montis videatur surgere in æthram.
Nam loca declarat sursum ventosa patere
Res ipsa, et sensum, monteis quom adscendimus altos.
Præterea, permulta mari quoque tollere toto
Corpora naturam, declarant litore vestes
Subspensæ, quom concipiunt humoris adhæsum.

Ver. 474. *Till broad o'er ether frowns the finish'd storm.*] The whole passage is thus imitated by Thomson:

At first a dusky wreath they seem to rise,
Scarce staining ether; but by swift degrees,
In heaps on heaps, the doubling vapour sails
Along the loaded sky, and mingling deep,
Sits on th' horizon round, a settled gloom.
Spring, 146.

Ver. 476. *In tide perpetual smoke the yellow steams*] To this delineation of our poet, also, we catch Thomson turning an occasional glance:

——*a yellow mist*
Far smoaking o'er th' interminable plain.
Spring, 193.

Ver. 478. ——*the winnowing wind*
Here, in huge masses, palpable to view,] The observation of Lucretius, that vapours collect principally, and are most largely exhaled into the atmosphere from the summits of lofty mountains, is consistent with daily fact; and the reason he here offers for their more frequent existence in these stations, is equally ingenious and philosophical. This, however, is not the only reason: in the publication, entitled "Description des quelques Appareils nouveaux, ou perfectionnés de la Fondation Teylerienne, l'an 1798," Van Marum has evinced, by an easy process, how easily water converts into vapour, by removing the pressure of the atmosphere; and on this account also, he justly concludes, that more must ascend, in a given space of surface, from the summit of mountains, than from either vallies or plains. The same fact is thus additionally confirmed by Mr. Kirwan, in his Geological Essays, No. 2. p. 98.

Till broad o'er ether frowns the finish'd storm.
Chief o'er the mountain-tops, as nearest heaven,
In tide perpetual smoke the yellow steams
That clouds engender, here conspicuous first.
For, undiscern'd at birth, the winnowing wind
Here in huge masses, palpable to view,
Dense, and redundant, drives them, whence aloft
Mount they embodied from the humid height.
For fact itself demonstrates, as we climb
The tall, steep cliff, that breezy scenes like these
Ope the best path for vapours to the skies.

Then from the seas that nature much selects
Prove the light garments flutt'ring o'er the strand
That catch the rising moisture; doubtless whence

"As we see the craggy summits of many of the highest mountains, now decomposing, being corroded by air and moisture, we must suppose that the same causes have operated in the most ancient times, and that, previous to their action, *these summits were much higher, and consequently better fitted for collecting vapours than at present.*"

To the same natural phænomenon, the Psalmist alludes, in the following verse, cxxxv. 7.

מעלה נשיאים מקצה הארץ׃

"He causeth the vapours to ascend *from the summits of the earth.*"

Ver. 482. *For fact itself demonstrates, as we climb*] Faber, and several other commentators, have condemned the original couplet, corresponding to this, and the two ensuing verses, as spurious, and unworthy of our poet, ver. 467:

Nam loca declarat sursum ventosa patere
Res ipsa et sensum, montes quomadscendimus altos.

Creech has omitted them in his English version. The opinion is altogether unjust, and Wakefield has wisely preserved them, and judiciously vindicated our poet:

The following, from Milton, are in perfect concordance with the passage before us:

Meanwhile the south wind rose, and with black wings
Wide-hovering, all the clouds together drove
From under heaven: *the hills to their supply*
Vapour and exhalation, dusk and moist,
Sent up amain. PAR. LOST, xi. 738.

Ver. 488. *Much, too, the clouds from ocean's restless brine*] It has been conceived by many philosophers, that, in consequence of such ascension of

Quod magis, ad nubeis augendas, multa videntur
Posse quoque e salso consurgere momine ponti:
Nam ratio consanguinea est humoribus omnis.
Præterea, fluviis ex omnibus, et simul ipsâ
Surgere de terrâ nebulas, æstumque, videmus;
Quæ, velut halitus, hinc ita sursum expressa feruntur,
Subfunduntque suâ cœlum caligine, et altas
Subficiunt nubeis paullatim conveniundo:
Urguet enim quoque signiferi super ætheris æstus,

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pure detached water, the salt from which it is extricated would, by its own weight, be precipitated towards the bottom of the sea, and hence the surface of the sea-waters be less salt than their inferior column. But by a variety of experiments, made by different chemists, in different parts of the world, this does not appear to be a fact. The sea, every where, in every climate, and to every depth, is found to be nearly equally impregnated with saline matter; and it is determined, on the most accurate trials, that this saline matter is in the proportion of about $\frac{1}{28}$ of its whole weight. The basis of common salt is natron or soda, and both this, and the marine acid, which combines with it, appear to be simple and primordial substances—for we know of no process of art or nature by which the one or the other of them can be either formed or decomposed. In the language of Mr. Kirwan, all simple substances must have been coeval with the creation, and have existed in the chaotic fluid, and originally, at least, in an *uncombined* state, the component parts of water alone excepted. The chaotic ocean, therefore, impregnated with muriatic acid, dissolved, during the process of creation, as large a portion of soda as was sufficient to saturate it: and while flowing over the surfaces of the secondary mountains, or gradually retreating from the summits of the primæval, by filling immense cavities it accidentally met with, it laid the foundation for those rocks or beds of solid salt which have since been explored in different parts of the globe. For the waters thus left behind, by evaporation, or occasionally by percolation through very minute pores, gave ample opportunity to the contained salt to crystallize and harden into vast solid masses. These, again, in process of time, have been occasionally abraded and gradually washed away by rains, or subterranean streams, into lakes and rivers; and hence many lakes and rivers accidentally met with, are also found impregnated with saline matters.

Ver. 490. *For, as the blood, so fluids all transpire.*] The original text, corresponding to this verse, has puzzled all the commentators. I follow the Bolognian manuscript of Pius, ver. 474.

Nam ratio cum sanguine adest humoribus omnis.

Literally, "for there exists one universal law with fluids, as with the blood:" that is to say, that all other fluids, as well as the blood, throw off their finer particles by a kind of insensible transpiration. And the position is perfectly just: hence spirits become weak, and aërated waters vapid.

That this is the true meaning of our poet, is, I think, perfectly obvious, from what immediately occurs in ver. 475 of the original:

Præterea, fluviis ex omnibus, et simul ipsâ
Surgere de terrâ nebulas, æstumque, videmus;
Quæ, *velut halitus*, hinc ita sursum expressa feruntur.

Thus, from each river, e'en from earth itself,
We trace th' ascending moisture, and the mist,
Like vital breath borne upwards.

Much, too, the clouds from ocean's restless brine
Draw ceaseless forth, their airy base to build:
For, as the blood, so fluids all transpire.
  Thus from each river, e'en from earth itself,
We trace th' ascending moisture, and the mist,
Like vital breath, borne upwards: which, when once
Firmly condens'd, and congregated close,
Veil all the heavens with clouds, and darkness deep;
While tides of rushing ether closer still

And he adverts to the resemblance, in this respect, existing between such kind of exhalations, and the fluids of the human body in v. 498. of the same Book, corresponding to v. 515. of the present translation:

——pariterque ita crescere utrumque,
Et nubeis, et aquam, quæquomque in nubibus exstat,
Ut pariter nobis corpus cum sanguine creseit,
Sudor item, atque humor quiquomque est denique membris.

——alike augment
Water and cloud, and all that cloud contains,
As with its frame augments the vital blood,
Or aught besides of moisture through the limbs.

I have dwelt the longer upon this explanation, because I am under the necessity of deviating from all who have preceded me, and have been compelled to hazard a new interpretation.

Creech, following the Vienna copy, reads,

Nam ratio cum sanguine *abest* humoribus omnis;

And Faber, incapable of understanding the meaning of the verse, when thus expressed, though he inserts it with this lection in his text, tells us in his notes, that the entire line ought to be expunged: a hint which the translators have readily adopted: for neither Marchetti, De Coutures, Guernier, or Creech, have taken the least notice of it.

Not thus Mr. Wakefield: observing the word *consanguineas* in both the ancient manuscript copies of Vossius, deposited in the university at Leyden, he ventures upon a small variation of his own, and, in his edition, which I have adopted in the text, exhibits it thus:

Nam ratio *consanguinea est* humoribus omnis,

which he explains by the following note: Liquores salsi, æque ac dulces, nebulas exhalant augendis atque conformandis nubibus idoneas. "Salt, as well as fresh waters, exhale vapours fit for the augmentation and conformation of clouds." I now leave the reader to determine for himself.

Ver. 496. *While tides of rushing ether closer still*] In the original, v. 480:

Urguet enim quoque superne *æthèris æstus*.

Gassendi explained the *æthèris æstus* to mean, the *streaming radiations of the sun*: and this interpretation has been followed by Marchetti, De Coutures, and Creech in his English version. This last critic, however, has well observed, in his Latin edition, which was published some years after his translation, and when he was better acquainted with his author, that the lashing of the rays of the sun must rather tend to dissolve the incipient cloud than to confirm and thicken it, and he immediately gives to the verse the interpretation contained in the line before us, *tides*

Et, quasi densendo, subtexit cærula nimbis.
Fit quoque, ut hunc veniant in cœtum extrinsecus illi
Corpora, quæ faciunt nubeis, nimbosque volanteis.
Innumerabilem enim numerum, summamque profundi
Esse infinitam docui; quantâque volarent
Corpora mobilitate, obstendi, quamque repente
Innumerabile per spatium transire solerent:
Haud igitur mirum est, si parvo tempore sæpe
Tam magnos monteis tempestas atque tenebræ
Cooperiant maria, ac terras, inpensa superne:
Undique quandoquidem, per caulas ætheris omneis,
Et quasi per magni circum spiracula mundi,
Exitus introitusque elementis redditus exstat.

Nunc age, quo pacto pluvius concrescat in altis
Nubibus humor, et in terras dimissus, ut imber,
Decidat, expediam. Primum, jam semina aquaï
Multa simul vincam consurgere nubibus ipsis
Omnibus ex rebus; pariterque ita crescere utrumque,

---

of rushing ether: that is to say, of that volatile, and highly spirited fluid which, ascending from the body of the earth, rises into the sublimest parts of the atmosphere, and was supposed by many ancient philosophers to afford nutriment to the sun and stars. The particles of this, as well as those of the still more attenuate stream of primordial atoms, which are for ever flying in all directions through the immensity of space, to recruit the different systems of worlds beyond worlds, to which our poet immediately afterwards adverts—he supposes, to be occasionally arrested in their flight, and to contribute to the formation of clouds, in the same manner as the grosser fluids of aqueous exhalation and vapour.

Ver. 496. ——*closer still*
Drive the light woof, and weave a thicker shade.] The original is highly beautiful, ver. 481:

Drive the light woof, and weave a thicker shade.
Then, too, perchance, the primal seeds of things
Borne from without, the mingled mass may join,
And swell the cloudy drap'ry. These how wide
Diffus'd through space, how countless their amount,
With what vast speed, what instantaneous flight
O'erpower they every distance, we erewhile
At large develop'd. Nought of wonder, then,
That storms, and blackness, gender'd e'en above,
Should oft abrupt o'er mountains, plains, and seas
Of amplest breadth, their dreary mantle stretch;
Since through all ether's nice, innumerous pores,
O'er the wide world like spiracles bespread,
The thronging atoms enter and retire.
Come, now, and next, how rain in clouds sublime
Forms, and o'er earth in genial showers descends,
Attentive, learn. And, first, the muse shall show
That seeds at once of clouds and water rise
From all created, whence alike augment

Et, quasi densendo, subtexit cærula nimbis.

"In the same manner," as Mr. Wakefield observes, "as in the art of weaving, the woof is thickened by thickening the texture of the threads employed."

Ver. 503. ——*we erewhile*
At large develop'd.——] See Book I. 1013. and Book II. 166.

Ver. 514. *That seeds at once of clouds and water rise*
From all created,——] He alludes to the well-known fact, that there is moisture contained in every thing; and, of course, that every thing, by parting with its moisture, affords a basis for water and clouds. On the modern doctrine of the origin of rain, and other aerial phænomena, see Note on v. 467 of the present Book.

Et nubeis, et aquam, quæquomque in nubibus exstat,
Ut pariter nobis corpus cum sanguine crescit,
Sudor item, atque humor quiquomque est denique membris.
Concipiunt etiam multum quoque sæpe marinum
Humorem, velutei pendentia vellera lanæ;
Quom supera magnum mare ventei nubila portant.
Consimili ratione ex omnibus amnibus humor
Tollitur in nubeis: quo quom bene semina aquarum
Multa modis multis convenere, undique adaucta,
Confertæ nubes humecti mittere certant
Dupliciter: nam vis venti contrudit, et ipsa
Copia nimborum, turbâ majore coactâ,
Urguens ex supero premit, ac facit ecfluere imbreis.
Præterea, quom rarescunt quoque nubila ventis,
Aut dissolvuntur solis super icta calore,
Mittunt humorem pluvium; stillante, quasi igni
Tela super calido, tabescens multa, liquescat.

Ver. 520. ——*the briny dew imbibe,*
As pendant fleeces——] Hence Virgil:

Tenuia nec *lanæ* per cœlum *vellera* ferri:

Nor buoyant flies *the fleecy wool* through heav'n.

In the language of Thomson:

——the fleecy mantle of the sky.
Autumn, 36.

Ver. 531. ——*as the strainer thick*
Of woof redoubled, near the solvent fire,
Drops o'er the vase its juices clear-refin'd.] The original has hitherto puzzled all the critics; I flatter myself, however, I have been fortunate enough to detect its true meaning. The simile refers to the mode by which the confectioner clarifies his preserves and jellies: the cloudy film, relaxed by the heat of the sun, pours down in drops its inclosed body of rain, through its apertures, in the same manner, the jelly-bag, when suspended before the fire, drops through its texture, hereby relaxed also, the substance with which it is filled. The original occurs thus, v. 514:

Water and cloud, and all that cloud contains,
As with its frame augments the vital blood,
Or aught besides of moisture through the limbs.
Then, too, the cloudy floscules, as they fly
O'er the broad main, the briny dew imbibe,
As pendant fleeces from the new-shorn flock.
While from each stream, alike, their spongy webs
Drink the light moisture; which, when once comprest,
Atom with atom, in innum'rous modes,
Innum'rous masses, the redundant clouds,
Prest by the winds, strive doubly to discharge:
For, while such pressure bursts them, their own weight,
Cloud throng'd o'er cloud, compels the falling shower.
Then, too, abraded by the winnowing winds,
Or by the sun relax'd, the cloudy film
Pours down its moisture, as the strainer thick
Of woof redoubled, near the solvent fire,
Drops o'er the vase its juices clear-refin'd.

——stillante, quasi igni
Tela super calido, tabescens multa, liqueseat.

In this manner, the text is uniformly written in the manuscript copies: but our modern editors, not comprehending the poet's meaning, have discarded *tela* for *cera*; and the translators have unanimously adopted this idle alteration. Thus, Creech:

——the injur'd cloud appears
Like melted running WAX, and drops in tears.

But this, independently of the unnecessary variation, does not, by any means, convey the idea existing in our poet's mind.

Vossius proposes *teda*, "*a torch*," and, in Mr. Wakefield's judgment, not unhappily. The latter, notwithstanding, retains, in his own edition, the genuine reading of the manuscripts as adhered to above; although he ingenuously confesses that he is at a loss to comprehend the poet's meaning: and has only continued the term *tela* from a desire of adhering, most religiously, to what appears to have been the true reading.

Sed vehe· ens imber fit, ubei vehementer utrâque
Nubila vi, cumulata, premuntur, et inpete venti.
At retinere diu pluviæ, longumque morari,
Consuerunt, ubi multa fluenter semina aquarum,
Atque aliis aliæ nubes, nimbeique rigantes,
Insuper, atque omni volgo de parte, feruntur;
Terraque quom fumans humorem tota redhalat.
Heic, ubi sol radiis, tempestatem inter opàcam,
Advorsâ fulsit nimborum adspargine contra;
Tum color in nigris exsistit nubibus arqui.

Cætera, quæ sursum crescunt, sursumque creantur;
Et, quæ concrescunt in nubibus omnia, prorsum

Ver. 544. *Ceaseless reflects, and rears the gaudy bow.*] Our poet, with suitable modesty, discusses the phænomenon of the rain-bow in very few words: for I have already observed, that the doctrine of dioptrics, or refracted light, on which its solution principally depends, was totally unknown to the philosophers of Greece and Rome. See Note on Book IV. v. 33. He offers, however, three observations upon this elegant meteor, and they are all minutely true to the fact itself. The first is, that it proceeds from a shower of rain; the second, that this shower must fall in a quarter directly opposite to the apparent station of the sun; and the third, that the solar light, striking upon the drops of which the shower consists, is reflected from them, and hence conveys the picture to the eye.

This accurate and philosophic opinion of our poet is the more surprising when contrasted with the common belief of his day, that the rain-bow was a kind of water-spout that sucked up water with its horns from lakes and rivers: a belief which seems, from the following passage, to have been acceded to by Virgil:

——et *bibit* ingens
Arcus——

Deep *drinks* the mighty bow.

And is thus referred to by Hippolyto Capilupi, in his epitaph on a drunkard:

Dum vixi sine fine bibi, *sic imbrifer arcus*,
Sic tellus pluvias sole perusta bibit

While life was mine I drank through every hour,
As earth, as rain-bows drink the rushing show'r.

In the Note on Book IV. v. 144. I have explained the cause of the iris or rain-bow upon the modern theory of optics. To this explanation I refer the reader, and shall only add, in the present place, that the idea of such an explanation was first conceived by Fletcher of Breslaw in 1571, and afterwards successfully, and more scientifically pursued by Antonio de Dominis, bishop of Spalato, in an express

But fierce the torrent falls when fierce at once
Clouds press o'er clouds, and winds with winds contend.
And much the rain persists, and long its stay
When countless crowd th' irriguous seeds above,
Profuse the louring vapours, and the clouds
Roll multitudinous, of bound devoid,
And all the smoking earth the wet rehales.
And when the sun, amid the rushing shower,
Gleams from a point all adverse to the storm,
The crystal moisture, as it falls, his rays
Ceaseless reflects, and rears the gaudy bow.
Thus all, through heaven, that forms or floats sublime,
Or in the clouds concretes, wind, hail, and snows,

---

treatise De Radiis Visus et Lucis, published by Bartolus in 1611.

To the above intelligent and modest description of Lucretius, I shall now take the liberty of adding Akenside's account of the same meteor, founded upon the doctrine of refraction, and imbued with much of the spirit of the modern theory. It is more diffuse; but, I think, not more poetical:

Nor ever yet
The melting rain-bow's vernal-tinctur'd hues
To me have shone so pleasing, as when first
The hand of science pointed out the path
In which the sun-beams, gleaming from the west,
Fall on the watery cloud, whose darksome veil
Involves the orient; and that trickling show'r
Piercing through every crystalline convex
Of clustering dew-drops to their flight oppos'd,
Recoil at length where concave all behind
Th' internal surface of each glassy orb
Repels their forward passage into air;
That thence direct they seek the radiant goal
From which their course began; and, as they strike,
In different lines, the gazer's obvious eye,
Assume a different lustre, through the brede
Of colours changing from the splendid rose
To the pale violet's dejected hue.

Pleas. of Imag. ii. 103.

For the latter part of this description, the author seems, in some measure, indebted to the following of Thomson:

Mean time refracted from yon eastern cloud,
Bestriding earth, the grand etherial bow
Shoots up immense; and every hue unfold,
In fair proportion running from the red
To where the violet fades into the sky.

Spring, i. 202.

Ver. 545. *Thus all, through heaven, that forms or floats sublime,*
Or in the clouds concretes, wind, hail, and snows,] See, on these subjects, Note on v. 467. of the present Book.

Omnia, nix, ventei, grando, gelidæque pruinæ,
Et vis magna geli, magnum duramen aquarum,
Et mora, quæ fluvios passim refrenat, aventeis
Perfacile est tamen hæc reperire, animoque videre,
Omnia quo pacto fiant, quâ reve creentur
Quom bene cognoris, elementis reddita quæ sint.
Nunc age, quæ ratio terraï motibus exstet,
Percipe: et in primis terram face ut esse rearis
Subter item, ut supera, ventosis undique plenam
Speluncis; multosque lacus, multasque lacunas,
In gremio gerere, et rupeis, diruptaque saxa:
Multaque sub tergo terraï flumina tecta
Volvere vi fluctus, submerso capite putandum est:

Ver. 549. *That chains the rivers panting to be free,*] I read with Mr. Wakefield, and the manuscripts of chief authority, ver. 530:

——quæ fluvios passim refrenat, aventeis.

In the common editions it occurs,

——quæ fluvios passim refrænat *cunteis*.

with far inferior spirit, and less consistent with our poet's accustomed energy.

Ver. 553. *Next learn the cause why earth's firm frame, at times,*
Quakes wide around.——] The phænomenon of earthquakes next attracts the poet's attention; and he offers a variety of solutions, some of which are local, and others more general, but all perfectly consistent with the natural fact itself; for its causes are certainly complex, and by no means depend upon one universal agent. Among the local causes, he particularly notices the immense excavations under the surface of the earth, into which the superincumbent stratum falls, in consequence of the pillars by which it is supported being either worn away by age, or washed away by subterranean lakes and rivers. Among the general causes, he more immediately remarks two; of which each proceeds from elastic wind or vapour: the one, a wind or vapour generated within such excavations, and pressing uniformly upwards; and the other, an elastic aura entering into such cavities from without, and rushing and bearing against some individual point of the general excavation, weaker, perhaps, than the rest, till its superincumbent stratum be hereby fractured, or even disploded by the violence of such force.

To this catalogue of causes modern science adds two more; a local cause, from the inflammation of combustible substances generated below, whence, uniformly, the origin of volcanos; and a general cause, from the abrupt ascent of electric aura, superabundantly existing in the earth itself, towards the clouds, when deficient in the subtle fluid of which they consist. Excited by this latter agent, an earthquake may

And hoary pearl, and frost's stupendous power,
Stern hard'ner of the waters, the restraint
That chains the rivers panting to be free,
These all the mind may hence, with ease, unfold;
Their rise develope, why created solve,
Taught by the seeds that form their various frames.
Next learn the cause why earth's firm frame, at times,
Quakes wide around. And, first, conceive her shap'd
Below as upwards; fill'd with roaring winds,
Fissures, and caverns, craggs, and pools profound,
And fractur'd rocks, through all her bosom spread:
While, mid her hollows, boundless rivers roll,
Wave after wave, and hide their secret heads:

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be considered as a species of subterranean thunder; and the laws applicable to the aërial will, with equal ease, apply to this intestine commotion. See Note on v. 434. of the Book before us.

Ver. 556. *Fissures, and caverns,—*] Thus, Dyer:

——frequent stopped,
The sunk ground startles me with dreadful chasm,
Breathing forth darkness from the vast profound
Of aisles and halls within the mountain's womb.

Ruins of Rome.

Ver. 559. ——*and hide their secret heads:*] I read with Vossius, from the generality of the codices, ver. 540:

——submerso capite putandum est,

a passage which, in almost all the modern editions, occurs thus:

——*submersaque saxa* putandum est.

The translators follow uniformly this idle emendation. Thus Marchetti, as a specimen of the rest:

—— e in lor sassi sommersi.

Nothing is more generally known, and few things more common, than the existence of such subterranean rivers as are here referred to; they are not unfrequent in our own country, and the excavations they often produce are of very considerable extent; and consequently the mischief to which they expose the superincumbent stratum. In the vicinity of Meudon in France, in 1787, probably from some such cause as is here referred to by our poet, an entire side of a hill, covered with trees, sunk fifty feet deep: its descent was gradual, however, and continued for not less than six years. In like manner, a great part of the mountain of Ziegenberg, in Bohemia, descended in the year 1770, not less than fifty fathoms towards the Elbe, its trees still accompanying it, partly erect, and partly inclined. See Reus's Bohemia, page 55.

Undique enim similem esse sui, res postulat ipsa.
Hiis igitur rebus subjunctis, subpositisque,
Terra superne tremit, magnis concussa ruinis
Subter, ubi ingenteis speluncas subruit ætas;
Quippe cadunt totei montes, magnoque repente
Concussu late disserpunt inde tremores:
Et merito; quoniam, plostris concussa, tremiscunt
Tecta, viam propter, non magno pondere, tota:
Nec minus exsultant ædes, ubiquomque equitum vis
Ferratos utrimque rotarum subcutit orbeis.

Fit quoque, ubei magnas in aquæ vastasque lacunas
Gleba vetustate ex terrâ provolvitur ingens,
Ut jactetur aquæ fluctu quoque terra vacillans;
Ut vas interea non quit constare, nisi humor
Destitit in dubio fluctu jactarier intus.

Ver. 560. *For fact itself proves earth throughout the same.*] Compared with the general bulk of the earth, it is with its shell or surface only that we are even yet acquainted; but its similarity of contexture is doubtless proved from positive fact, so far as we have obtained an insight into its contents.

Ver. 570. ——*when, near, the light aërial car*
Drawn by fleet coursers whirls its rattling wheels.] I follow the amended reading of Wakefield, ver. 549:

——ubiquomque equitum vis
Ferratos utrimque rotarum subcutit orbeis.

Generally, we meet with it thus, contrary to all the authorities:

——*ubi currus fortis equûm* vis
Ferratos utrinque rotarum succutit orbeis.

Seneca appears to have had his eye directed to this passage, in the following paragraph, Nat. Quæst. vi. 22. Si quando magna onera per vicos vehiculorum plurium tracta sunt, et rotæ majori nisu in salebras inciderunt, terram concuti senties. Asclepiodorus tradit, cum petra è latere montis abrupta cecidisset, ædificia vicina tremore collapsa. Idem sub terris fieri potest, ut ex hiis quæ impendent, rupibus aliqua

For fact itself proves earth throughout the same.
These truths premis'd, earth trembles, then, profound,
Shook into ruins, when the rage of time,
Deep down the caves immensely scoop'd below,
Tumbles th' incumbent hills; abrupt they fall
With vast concussion, while, from scene to scene,
Winds the dread tremour, propagated quick:
And well may wind; since e'en the sluggish wain,
Though fill'd but half, as o'er the street it rolls,
Shakes every mansion; since, alike disturb'd,
Quake they when, near, the light aerial car
Drawn by fleet coursers whirls its rattling wheels.
Earth trembles, too, when, undermin'd by age,
Wide into lakes of boundless breadth beneath
Th' incumbent glebe sinks sudden, her vast shell
By the deep dash far stagger'd, as the bowl
Reels, fill'd with fluid, when its fluid rocks.

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resoluta magno pondere et sono in subjacentem cavernam cadat, eo vehementius, quo aut plus ponderis habuit, aut venit altius; et sic commovetur omne tectum cavatæ vallis. "If, when heavy loads are drawn through the public streets, the wheels of the waggon plunge, with great force, into an accidental hollow, the ground will be perceived to tremble. Asclepiodorus relates, that a rock, when accidentally precipitated from the side of a mountain, shook, by its fall, all the buildings in its vicinity. Such may be the facts that take place in subterranean cavities; if any of the superincumbent rocks, that constitute their summits, be detached, and fall with vast noise down to their extreme bottoms, in proportion to the violence, the weight and impetuosity with which they descend, the surface of the overhanging earth will be affected, and tremble."

Ver. 575. *By the deep dash far stagger'd,*——] Hence, Thomson:

> The central waters round impetuous rushed
> With universal burst into the gulph;
> And o'er the high-piled hills of fractured earth
> Wide dashed the waves, in undulation vast.
>
> Spring, l. 31[illegible].

Præterea, ventus quom, per loca subcava terræ
Conlectus, parte ex unâ procumbit, et urguet
Obnixus magnis speluncas viribus altas;
Incumbit tellus, quo venti prona premit vis:
Tum, supra terram quæ sunt exstructa domorum,
Ad cœlumque magis quanto sunt edita quæque,
In clinata minent in eamdem, prodita, partem;
Protractæque trabes inpendent, ire paratæ.
Et metuunt magni naturam credere mundi
Exitiale aliquod tempus clademque manere,
Quom videant tantam terrarum incumbere molem?
Quod, nisi respirent ventei, vis nulla refrenet
Res, neque ab exitio possit reprehendere eunteis;
Nunc, quia respirant alternis, inque gravescunt,
Et, quasi conlectei, redeunt, ceduntque repulsei;
Sæpius hanc ob rem minitatur terra ruinas,
Quam facit; inclinatur enim, retroque recellit;
Et recipit prolabsa suas in pondere sedes.
Hac igitur ratione vacillant omnia tecta,

Ver. 584. *And shrink mankind, then, from the creed that soon*] In the manuscripts and editions, this passage occurs as a positive assertion. There is no doubt, however, that it should be read with a note of interrogation: in which mode it receives an equal accession of spirit and perspicuity. The Baron de Coutures has the merit of proposing this emendation: "Les hommes," says he, "peuvent-ils doubter apres ces ebranlemens de la terre, que la nature n'ait pas un tems destiné pour sa totale destruction, puisque si les vents ne cessoient pas leurs souffles furieux, rien ne pourroit s'opposer à sa perte? Bentley proposes a similar reading.

And when the winds, that oft her hollows crowd,
Rush all collected, with fermenting force,
Tow'rds one vext quarter,—where the fight prevails
Earth nods o'erpower'd; each building rear'd above
Totters throughout, while those of loftier height
Dread instant ruin, their connecting beams
Disjointed, torn, and tumbling from their posts.
And shrink mankind, then, from the creed that soon
Some ruthless conflict the wide world itself
Shall crush with wreck unbounded—while they see
Earth shook so largely through her inmost mass?
E'en now, should ne'er such winds their rage relax,
Their boist'rous ferment, nought of power oppos'd
Could stem th' assault, and instant fate must flow.
But as, by turns, these labour, and forbear,
Now firm advance, and now, exhausted, fly,
Earth ofter far is menac'd than destroy'd.
For, from her centre thrown, she strait returns,
Confirms her balance, and her course resumes;
While, mid the shock, each building reels; the high

Ver. 588. *E'en now, should ne'er such winds their rage relax,*] Hence, doubtless, Virgil:

Luctantes ventos, tempestatesque sonoras
Imperio premit, ac vinclis et carcere frænat.—
Ni faciat, mare ac terras, cœlumque profundum
Quippe ferant rapidi secum, verrantque per auras.
Æn. i. 57.

With power supreme he curbs the struggling winds,
The sounding tempests in dark prisons binds;
Which did he not, their unresisted sway
Would sweep the world before them in their way.
Dryden

Summa magis mediis, media imis, ima perhilum.
Est hæc ejusdem quoque magni caussa tremoris;
Ventus ubi, atque animæ subito vis maxuma quædam,
Aut extrinsecus aut ipsâ tellure coorta,
In loca se cava terraï conjecit, ibeique
Speluncas inter magnas fremit ante tumultu;
Vorsabundaque portatur: post, incita quom vis,
Exagitata foras erumpitur; et simul, altam
Diflindens terram, magnum concinnat hiatum.
In Syriâ Sidone quod adcidit, et fuit Ægii
In Peloponneso: quas exitus hicc' animaï
Disturbât urbeis, et terræ motus obortus!
Multaque præterea cecidcrunt mœnia, magnis
Motibus, in terris; et multæ per mare pessum
Subsedere suis pariter cum civibus urbes.
Quod, nisi prorumpit, tamen inpetus ipse animaï,
Et fera vis venti, per crebra foramina terræ

Ver. 598. *Hence, too, the mighty tremour: that when wind,*

Or air elastic,——] Epicurus, according to Seneca, regarded this as the most frequent cause of earthquakes, Nat. Quæst. vi. 20. Nullam tamen placet Epicuro causam esse majorem quam spiritum.

Polignac alludes to the same cause in the following verses:

Sic etiam terræ latebris reperitur in altis,
Æs aurumque coquens, intestinasque cavernas
Æstu perpetuo complens, quo conditus aër
Rarefit. Verum hunc si forte cadentia montis
Fragmina præpediant quin exhaletur in auras
Terrarum hinc subitus tremor horribilesque minæ.
Anti-Lucr. v. 487.

Thus in earth's latent caverns trace we oft
Fus'd gold and copper, with perpetual steam,
Filling the hollows, and th' elastic air
Expanding wide. If here from rocks above
Huge fragments fall, and block th' external pores,
Th' incumbent earth must quake, and wide around
Dread ruin rush.——

Ver. 605. *Such* Syrian Sidon *saw, and* Ægium *such,*] In the Latin text, v. 584:

Most, less the low, the lowliest least of all.
Hence, too, the mighty tremour: that when wind,
Or air elastic, into tumult work'd,
Uprear'd within, or entering from above,
Still tow'rds one point of earth's vast caverns pours,
Whirl'd in wild vortex, its enormous force
At length bursts sudden—and the solid soil
Fractures amain, with broad tremendous yawn.
Such Syrian Sidon saw, and Ægium such,
Pride of Morean plains. What earthquakes dire,
What towns o'erthrown has this disruption sole
Of frantic air engender'd! what vast walls
Have tumbled from their base! what peopled ports
Deep down the main in common ruin sunk!
E'en should th' elastic vapour the stern soil
Cleave not abrupt, yet, issuing through its pores,
Earth trembles still, with quiv'ring horror shook,

'In Syriâ Sidone quod adcidit, et fuit Ægii
In Peloponneso.

Thus all the ancient books; but Lambinus, and the host of servile critics who have succeeded him, have idly changed *Syria* into *Tyria*, and *Ægii* into *Ægis*. Mr. Wakefield has re-established the true reading; and has justly observed from Pliny, Nat. Hist. xxxv. 51. and iv. 6. that the city of Sidon was situated in Syria, and that Ægium was a city of Peloponnesus, now denominated Morea, as well as Ægæ. An account of the dreadful earthquakes to which our poet refers, as having occurred in the vicinity of these cities, is still extant in the writings of Aristotle, Meteor. ii. 8. and Possidonius in Strab.

Ver. 608. ——*what vast walls*
Have tumbled from their base! what peopled ports] Thus Ovid, enumerating two cities in the immediate neighbourhood of Ægium:

Si quæras Helicen et Buran, Achaidas urbes,
Invenies sub aquis; et adhuc ostendere nautæ
Inclinata solent cum mœnibus oppida mersis.
Met. xv. 293.

If Helice thou seek, or Buræ, towns
Erst in Achaia, seek them in the main.
Beneath the waves, e'en now, the sailor points
Their walls, and ruins.

Dispartitur, ut horror; et incutit inde tremorem:
Frigus utei, nostros penitus quom venit in artus,
Concutit, invitos cogens tremere, atque movere.
Ancipiti trepidant igitur terrore per urbeis;
Tecta superne timent, metuunt inferne cavernas
Terraï ne dissolvat Natura repente;
Neu distracta suum late dispandat hiatum,
Idque suis confusa velit conplere ruinis.
Proinde, licet quam vis, cœlum terramque reantur
Inconrupta fore, æternæ mandata Saluti:
Et tamen interdum præsens vis ipsa pericli
Subditat hunc stimulum, quadam de parte, timoris;
Ne pedibus raptim tellus substracta feratur
In barathrum, rerumque sequatur prodita summa
Funditus, et fiat mundi confusa ruina.
Nunc ratio reddunda, augmen quur nesciat æquor.
Principio, mare mirantur non reddere majus
Naturam, quo sit tantus decursus aquarum,
Omnia quo veniant ex omni flumina parte.
Adde vagos imbreis, tempestatesque volanteis;
Omnia quæ maria, ac terras, sparguntque rigantque:

Ver. 625. *Down plunging headlong to th' abyss below,*] Lambinus conjectures, that in this part of his delineation, our poet had his eye directed to the following verses of Homer. The conjecture appears idle; but the verses are well worth quoting for a comparison:

——αυταρ ειερθε Ποσειδαων ετιναξε
Γαιαν απειρεσιην, ορεων τ' αιπεινα καρηνα——.

As shakes the frame, through every limb convuls'd,
When cold severe assaults us unprepar'd.
A two-fold terror, then, mankind appals;
Above, the buildings menace, and, below,
The shudd'ring ground threats instant into depths
Boundless to sink, or ope its giant jaws
And, in a moment, swallow all that lives.
E'en those who hold that heav'n and earth exist
Each incorrupt, and of eternal date,
Touch'd by the present danger, then betray
Strong latent dread lest earth forsake their feet
Down plunging headlong to th' abyss below;
Lest nature fail, and, o'er the total world,
Void of all bounds promiscuous ruin rush.

Next why the main o'erflows not let us solve.
And, first, man wond'rous deems it the hoarse fall
Of mountain-cataracts, the ceaseless press
Of streams innum'rous from innum'rous points,
Year after year, its limits never swell.
Yet add to these whate'er from heaven descends
In showers and tempests, scatter'd wide alike

Εδδεισι δ' ὑπενερθε, ἀναξ ὑπερ, Ἀιδωνευς·
Δεισας δ', ἐκ θρονου ἁλτο, και ἀιχθη, μη οἱ ὑπερθε
Γαιαν αναρρηξειε Ποσειδαων ἐνοσιχθων.— Il. Υ. 57.

Beneath stern Neptune shakes the solid ground,
The forests nod, the mountains tremble round.—

Deep in the dismal regions of the dead,
Th' infernal monarch rear'd his horrid head,
Leap'd from his throne, lest Neptune's arm should lay
His dark dominions open to the day,
And pour in light on Pluto's drear abodes.— Pope.

Adde suos funteis: tamen ad maris omnia summam
Guttaï vix instar erunt unius ad augmen;
Quo minus est mirum, mare non augescere magnum.

Præterea, magnam sol partem detrahit æstu:
Quippe videmus enim vesteis, humore madenteis,
Exsiccare suis radiis ardentibus solem.
At pelage multa, et late substrata, videmus.
Proinde, licet quam vis ex uno quoque loco sol
Humoris parvam delibet ab æquore partem,
Largiter in tanto spatio tamen auferet undis.
Tum porro, ventei quoque magnam tollere partem
Humoris possunt, verrentes æquora ventei:
Unâ nocte vias quoniam persæpe videmus
Siccari, mollisque luti concrescere crustas.
Præterea, docui multum quoque tollere nubeis
Humorem, magno conceptum ex æquore ponti;
Et passim toto terrarum spargere in orbi,

Ver. 648. *Brush off the wet, and harden all the mire.*] In perfect similarity with the following passage of the book of Job, ch. xxxviii. 38:

בצקת עפר למוצק
ורגבים ידבקו׃

When the dust is impalpably attenuated,
And the plashy clods are impacted together.

In our common version, "When the dust groweth *into hardness*;" and in that of Schultens, "Quum conflatur pulvis *in fusum quid*;" which latter is approved by Mr. Parkhurst, and interpreted, "When the dust is *fused* or melted into a *molten mass*." The meaning of the Hebrew יצק, is here more nearly approached than in the standard English translation, but it is, nevertheless, by no means given completely. The verb יצק, in its present situation, implies to be *dissolved*, rather than to be *fused*, "to be comminuted," "broken down," or "decompounded," into the smallest elemental atoms of which the corpuscles of dust may be supposed to consist: and the entire passage refers to those fine, imperceptible spicula of sand which are for ever floating over the burning deserts of Syria and Arabia, and so fre-

O'er earth and ocean, every fountain add
And still the vast, accumulated mass,
Weigh'd with the deep, would scarce a drop exceed.
Whence nought stupendous that it ne'er augments.
Next, daily, much the solar heat exhales.
For as the sun, o'er humid garments pours
His beams profuse, with instant haste they dry.
But broad and spacious spreads the liquid main;
Whence, from each spot though small the lymph absorb'd,
Yet large th' amount its total surface yields.

Then, too, the flick'ring winds with ceaseless wing
Winnow an ample portion. Such their power
Oft, in a night, the swampiest paths they cleanse,
Brush off the wet, and harden all the mire.
And earlier have we taught that every cloud
Imbibes, luxurious, the redundant dew
Rais'd from the face of ocean; and o'er earth,

---

quently produce blindness to the incautious traveller.

Not widely different the following beit or couplet in Psalm xviii. 42. which has seldom been properly translated:

ואשחקם כעפר על
פני רוח כטיט חצות אדיקם:

Diminutive as the dust did I grind them,
I scatter'd them like the mire of the streets before the wind.

The Hebrew term דק, is peculiarly emphatic: and Bate has justly observed, that it implies the smallest conceptible corpuscle of matter, like the atom of the Epicurean philosophy. Hence, had we the word, the latter part of the verse might be still more accurately rendered, "Like the mire of the street before the wind, did I *atomize* them," or "reduce them to atoms." The term is used in the same sense by Dr. Stock, Isaiah, ch. xl. 15:

הן איים כדק יטול

Behold! the islands he heareth up as *a mote*.

And is univocally rendered, by bishop Lowth, "as an *atom*."

Quom pluit in terris, et ventei nubila portant.
Postremo, quoniam raro cum corpore tellus
Est, et conjuncta est, oras maris undique cingens;
Debet, ut in mare de terris venit humor aquaï,
In terras itidem manare ex æquore salso:
Percolatur enim virus, retroque remanat
Materies humoris, et ad caput amnibus omnis
Confluit; inde super terras redit agmine dulci,
Quâ via secta semel liquido pede detulit undas.
Nunc ratio quæ sit, per fauces montis ut Ætnæ
Exspirent ignes interdum turbine tanto,
Expediam: neque enim mediocri clade coorta
Flammæ tempestas, Siculûm dominata per agros,

Ver. 657. *Part still retreats, and, percolated pure,*] This, and the three ensuing verses, of exquisite beauty in the original, are repeated from Book V. v. 282. The same idea occurs in Ecclesiastes, i. 7:

All the rivers run back into the sea, yet is not the sea full;
To the place whence the rivers arose, return they again.

This doctrine is, however, denied by many modern geologists: but it is, probably, true in many cases; and particularly in the vicinity of the Mediterranean towards the isthmus of Suez, the level of whose waters is very considerably higher than those of the Red Sea. It is well known, that into the Mediterranean there is a perpetual flux, without a corresponding reflux; and it is contended, by various philosophers, that its excess is uniformly carried off by such chasms in its channels. This, however, is not the only theory upon this subject. See Note on Book V. v. 526.

Ver. 658. *Fresh bubbles distant at some fountain-head.*] Thus Thomson:

The crystal treasures of the liquid world,
Through the stirr'd sands a bubbling passage burst;
And, welling out, around the middle steep,
Or from the bottoms of the bosom'd hills,
In pure effusion flow. Summer, 822.

It is to this same cause Polignac appears to allude in the following passage, in which he denies that all the rivers we are acquainted with, can possibly be produced from descending rains:

Namque ego non credam fluvios ex imbribus omnes
Enasci; quanquam multis ea forsan origo
Fontibus esse potest, quos fervida dissipat æstas,
Cum semel exussit campos penetrabilis ardor,
Et pluvialis aquæ venas exhausit inanes.
At rivi multum est ratio diversa perennis,
Quem non æstivi soles, non torrida cœli
Zona, nec urentes possunt absumere venti:

Lash'd by the breeze, in copious showers distils.
And as this mass terrene of frame consists
Porous throughout, and with a thousand coasts
Girds all the deep—since to the deep it sends,
In part, its fluids, doubtless so, alike,
Part still retreats, and, percolated pure,
Fresh bubbles distant at some fountain-head.
Whence winds again the dulcet tide through paths
Its liquid feet have printed oft before.
Now next explain we whence, from ÆTNA's jaws,
Bursts the bright storm of wild projectile fire;
Storm that, once kindled o'er SICILIA's plains,
Raves with no common ruin, as around

Plurima cum medio se præbeat insula ponto,
Qua micat in flammas ferventior orbita solis,
Nullus ubi cadit, aut certe pareissimus imber,
Et tamen irrigui fontes per amœna vireta
Perpetuos volvunt Neptuni ad littora fluctus.
ANTI-LUCR. ix. 183.

Not mine the creed that every stream from showers
Rises; though haply many a fountain hence
Springs into birth, which summer suns disperse
When once the fields their potent radiance dries,
And empties all their pluvial veins can boast.
But different far the stream perpetual springs
That, undiminish'd, spurns the torrid zone,
The sun's red rage, and burning blast of heav'n.
For many an isle there is amid the main,
Shorn from the world, with double noon that flames,
Where never shower, or shower but rare, descends,
Still gelid streams that boasts, perpetual pour'd
Through laughing verdure to the distant deep.

Ver. 664. *Raves with no common ruin,——*] I follow the lection of Mr. Wakefield, v. 641:

——neque enim mediocri clade coorta.

In all the common editions it occurs thus:

——neque enim *media de* clade coorta.

But the interpreters have not been satisfied with such a lection; and accordingly, Gronovius has proposed

——neque enim *media Græciade* coorta;

Salmasius,

——neque enim *media è re* clade coorta;

Faber, and Havercamp,

——neque enim *dia* de clade coorta;

and Bentley,

——neque enim *Enceladi* de clade coorta.

The description, in Virgil, of the same subterraneous destruction, occurs thus:

Vidimus nudantem ruptis fornacibus Ætnam
Flammarumque globos, liquefactaque volvere saxa.

Finitumis ad se convortit gentibus ora;
Fumida quom cœli scintillare omnia templa
Cernentes, pavidâ conplebant pectora curâ,
Quid moliretur rerum Natura novarum.
Hiisce tibi in rebus late est alteque videndum,
Et longe cunctas in parteis despiciundum,
Ut reminiscaris, summam rerum esse profundam,
Et videas, cœlum summaï totius unum
Quam sit parvola pars, et quam multesima constet:
Nec tota pars, homo terraï quota totius unus.
Quod bene propositum si plane contueare,
Ac videas plane, mirari multa relinquas.

Num quis enim nostrûm miratur, si quis in artus
Adcepit calido febrim fervore coortam,
Aut alium quem vis morbi per membra dolorem?
Obturgescit enim subito pes, adripit acer
Sæpe dolor denteis, oculos invadit in ipsos;
Exsistit sacer ignis, et urit, corpore serpens,

Armorum sonitum toto Germania cœlo
Audiit; insolitis tremuerunt motibus Alpes.
Georg. i. 474.

How oft we view'd, along th' expanse below,
Wide seas of fire down shatter'd Etna flow,
While globes of flame the red volcano threw,
And fervid rocks that lighten'd as they flew.
Sotheby.

Ver. 672. ——*how small, reflect* *One system sole when with th'* Entire *compar'd*] Thus Milton:

When I behold this goodly frame, this world
Of heaven and earth consisting, and compute
Their magnitudes; this earth a spot, a grain,
An atom with the firmament compar'd,
And all her number'd stars, &c.
Par. Lost, viii. 15.

Ver. 683. ——*the hallow'd erisepelas*]

From many a realm the general eye it draws,
And strikes the general heart with dread severe,
Wond'ring, beneath the dingy-flaring cope,
What new adventure Nature means t' achieve.
Such facts t' unfold thy mind must deep, and wide,
And long expatiate o'er their sep'rate parts;
Recall the doctrine that th' Entire of Things
Throughout is boundless; and how small, reflect
One system sole when with th' Entire compar'd
With systems thronging; systems so complex
That each to all weighs less than man to earth.
A creed once rooted that will raise thee oft
O'er vulgar wonders, and each fact evolve.
Who strange conceives it that this mortal frame
Should rage, at times, with fever, or aught else
Of keen disease through all the body spread?
That gout the foot should madden? ache severe
Torture the teeth, or wound the visual orb?
Or that the hallow'd erysipelas

In the original, v. 660:

Exsistit *sacer ignis*, et urit, corpore serpens.

Among ourselves the *St. Anthony's fire*, the same species of religious character being preserved. Thus Virgil:

——contactos artus *sacer ignis* edebat.
Georg. iii. 566.

The *holy fire* consum'd th' affected limbs.

The version of De Coutures is certainly incorrect: "Un certain feu caché serpente dans *l'interieur* des parties du corps."

Lucretius is not speaking generally of the hot paroxysm of a fever, but of a definite and idiopathic disease, exhibiting marks of extreme *external*, instead of *internal* heat, and accompanied with exulcerations; the symptoms of which, indeed, he has more fully described in v. 1163. of the present Book, and concerning which Celsus, v. 28. denominating it after the Greeks, Erysipelas, proceeds

Quamquomque adripuit, partem, repitque per artus;
Nimirum, quia sunt multarum semina rerum;
Et satis hæc tellus morbi, cœlumque, mali fert,
Unde queat vis immensi procrescere morbi.
Sic igitur toti cœlo, terræque, putandum est
Ex infinito satis omnia subpeditare,
Unde repente queat tellus concussa moveri,
Perque mare, ac terras, rapidus percurrere turbo,
Ignis abundare Ætnæus, flammescere cœlum;
Id quoque enim fit, et ardescunt cœlestia templa.
Et tempestates pluviæ graviore coortu
Sunt, ubi forte ita se tetulerunt semina aquarum.

At nimis est ingens incendii turbidus ardor!
Scilicet, et fluvius, qui visus, maxumus ei,
Qui non ante aliquem majorem vidit: et ingens
Arbor, homoque, videtur; et omnia, de genere omni,
Maxuma quæ vidit quisque, hæc ingentia fingit:
Quom tamen omnia cum cœlo, terrâque, marique,
Nihil sint ad summam summaï totius omnem.
Nunc tamen, illa modis quibus, inritata repente,

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to inform us, that *Ignis sacer malis ulceribus* annumerari debet.

Marchetti is, as usual, possest of far more fidelity than the French translator:

——*Il sagro foco* insorge
E scorrendo pe'l corpo ardente qualunque
Parte n'assale, e per le membra serpe

See a more ample description in the present Book, v. 1208. of this translation.

Ver. 703. *The boundless compass of th' unbounded whole.*] In the original text,

—— ad *summam summaï* totius omnem.

Ver. 679.

O'er every limb should trail his serpent fires?
Here nought lurks wond'rous: for from various seeds
Spring they, confest, in various modes combin'd;
While heaven and earth alone such seeds adverse
Amply supply to rear the tyrant ill.—
Deem, then, alike, that heaven and earth themselves
Draw from the boundless whole the stores evinc'd
When, with wild horror, quakes the world abrupt;
O'er earth and main when rushing whirlwinds sweep,
Or heaven inflames with fires from ÆTNA thrown.
For heaven thus blazes from the seeds of fire
Countless collected, as the pond'rous storm
Falls in full shower when aqueous atoms throng.
"But far too vast the sparkling deluge pour'd!"
And vast alike to him the stream must flow,
In earlier life who ne'er so vast has seen:
And vast each tree, each sentient tribe, and all
Till now ne'er witness'd; while each sight so vast,
While heaven, earth, main, united ne'er augment
The boundless compass of th' unbounded whole.
Explain we, then, from ÆTNA's forge immense

Marchetti thus:

——l'immensa
Somma d'ogni altra *somma*.——

Ver. 704. *Explain we, then, from* ÆTNA's *forge*—] Little can be added from modern philosophy to the causes here assigned of the volcanic eruptions of this extraordinary mountain. Our poet attributes them to heated and extricated air converted, in consequence of its heat, into violent currents of wind, which dissolve and inflame the sulphureous, and other combustible substances, of which the sides and bottoms

Flamma foras vastis Ætnæ fornacibus ecflet,
Expediam. Primum, totius subcava montis
Est natura, fere silicum subfulta cavernis.
Omnibus est porro in speluncis ventus, et aër;
Ventus enim fit, ubi est agitando percitus aër.
Hicc' ubi percaluit, calefecitque omnia circum
Saxa furens, quâ contingit, terramque; et ab ollis
Excussit calidum flammis velocibus ignem;
Tollit se, ac rectis ita faucibus eicit alte,
Vortitque ardorem longe, longeque favillam
Differt, et crassâ volvit caligine fumum;
Extruditque simul mirando pondere saxa.
Ne dubites, quin hæc animaï turbida sit vis.

of its enormous caverns consist; and which receive additional force from the entrance of external winds and waters through the medium of its extreme hollows, that extend even to the sea itself, as also from many of its mouths or craters that open towards the summit, and are converted, in like manner, by the internal heat of the mountain, into elastic vapour. The combined force of so many tremendous agents are altogether inconceivable, and perfectly sufficient to account for all the phænomena of volcanic eruptions.

Ver. 708. ——*for agitated air*
To wind converts,——] Such is the doctrine of the present day as well: but our poet is here opposing the tenet of Aristotle, who contended, Meteor. i. 2. that wind is a distinct and peculiar exhalation, emitted principally from the cavities of the earth; and, according to Metrodorus, Plut. de Placit. Philos. xxxvii. originating from an aqueous basis. This opinion was long maintained in the schools after the revival of literature in Europe, notwithstanding that the Epicurean doctrine was corroborated by the additional suffrages of Anaxagoras, Anaximander, and Hippocrates.

Ver. 709. *To wind converts, resistless in its might. This, when once heated,* &c.] Thus, Milton:

——as when the force
Of subterranean winds transports a hill
Torn from Pelorus, or the shatter'd side
Of thund'ring Ætna, whose combustible
And fuell'd entrails, thence conceiving fire,
Sublim'd with mineral fury, aid the winds,
And leave a singed bottom, all involv'd
In stench and smoke. Par. Lost, i.

Ver. 714. ——*ejects*
Tow'rds every point its embers, and its blaze, &c.]

How flows the fiery deluge when enrag'd.
And, first, the mighty mount is scoop'd throughout,
High arch'd with sparry columns: winds and airs
Fill all its caves, for agitated air
To wind converts, resistless in its might.
This, when once heated, and its torrid breath
Has heated, too, the mingled mass around
Of rocks, and earths sulphureous, and a flood
Of frantic flame engender'd—bursts abrupt,
And, through the mountain's monster-jaws, ejects
Tow'rds every point its embers, and its blaze;
Belches whole atmospheres of smoke, and high
Hurls from its base huge crags of weight immense.
To air incens'd such wonders, all, resolve.

It is difficult for two poets, when describing the same subject, to avoid all similarity of terms and colouring. But there is more, I think, than an accidental resemblance to the present delineation of Lucretius in Virgil's history of the same phænomenon, which is as follows, Ætna being here also the mountain referred to:

Interdumque atram prorumpit ad æthera nubem,
Turbine fumantem piceo et candente favillâ:
Attollitque globos flammarum, et sidera lambit:
Interdum scopulos avulsaque viscera montis
Erigit eructans, liquefactaque saxa sub auras
Cum gemitu glomerat, fundoque exæstuat imo.
Æn. iii. 572.

By turns a pitchy cloud she rolls on high;
By turns hot embers from her entrails fly;
And flakes of mounting flames, that lick the sky.
Oft, from her bowels, massy rocks are thrown,
And, shiver'd by the force, come, piece-meal, down:
Oft, liquid lakes of burning sulphor flow,
Fed from the fiery springs that boil below.
Dryden.

Ver. 716. *Belches whole atmospheres of smoke, and high*
Hurls from its base huge crags of weight immense.] Not unresembling the following of Dyer:

Ceylon's grey peaks, from whose volcanos rise
Dark smoke, and ruddy flame, and glaring rocks,
Darted in air aloft.
Fleece, iv.

Præterea, magnâ ex parte mare montis ad ejus
Radices frangit fluctus, æstumque resolvit.
Ex hoc usque mare speluncæ montis ad altas
Perveniunt subter fauces: hac ire, fatendum est,
Et penetrare, mari, penitus res cogit, aperto,
Atque eeflare foras; ideoque extollere flammas,
Saxaque subjectare, et arenæ tollere nimbos.
In summo sunt vertice enim crateres, ut ipsei
Nominitant; nos quod fauces perhibemus, et ora.
Sunt aliquot quoque res, quarum unam dicere caussam
Non satis est, verum plureis; unde una tamen sit.
Corpus ut exanimum si quod procul ipse jacere

Ver. 721. ——*for thus far*
Doubtless extend its glimm'ring halls,—] Both Ætna and Vesuvius probably existed as mountains, excavated, and extending their subterraneous galleries to the sea, prior to their conversion into volcanos. With respect to Vesuvius, the number of Neptunian stones it throws up, of which some account may be seen in Gioeni's Lithography, confirms this opinion; and as to Ætna, Mr. Kirwan has accurately observed, that there can be no doubt upon the subject. "Dolomieu," says he, Geological Essay, p. 103, "found immense heaps of sea-shells in its north-east flanks, at the height of near 2000 feet over the surface of the sea." Hence, he justly concludes, "that this volcano existed as a mountain before it was uncovered by the sea:" and adds, "that, at the height of about 2400 feet, there are regular strata of grey clay, filled with marine shells: these strata must then have been deposited while the mountain was forming under the sea." In addition to which, I may observe that, even in modern times, volcanic lava has frequently been found in the sea towards the roots of this mountain. The island of Goza, near Malta, unquestionably of volcanic origin, is well known to be so considerably excavated by the Mediterranean, as to have a variety of *jets-d'eaux* of salt-water spouting up through its surface; and the ascending stream, when it has once found a spiracle, rushes often with such violence as to drive back the heavy stones, and other matters with which the inhabitants occasionally attempt to block up the passage. See M. Boisgelin's Ancient and Modern Malta, 3 vols. 4to. 1804. Some such communication between Ætna and the adjacent sea is conjectured by our poet, and perhaps actually exists.

Ver. 722. ——*and hence*
Draws it, at times, fresh stores of madd'ning wind;] I must cite the original, since it has not been generally understood by the interpreters, ver. 694:

Præterea, magnâ ex parte mare montis ad ejus
Radices frangit fluctus, æstumque resolvit.
Ex hoc usque mare speluncæ montis ad altas
Perveniunt subter fauces: hac ire, fatendum est,

Then to the main, too, spreads th' enormous hill
Its roots profound, the rough, rebellowing surge
Baffling at each encounter: for thus far
Doubtless extend its glimm'ring halls, and hence
Draws it, at times, fresh stores of madd'ning wind;
An ampler storm hence brewing, and its flames,
Its rocks, its sands projecting wider still:
While, at its top, the whirlwind craters throng,
By us term'd aptly its voracious jaws.
Thus many a cause we bring; for many a cause
Oft it behoves us, though but one subsist.
As when, at distance, some dead corse thou view'st

Et penetrare, mari, penitus res cogit, aperto,
Atque eeflare foras.

The language of Creech gives the general interpretation of the editors, ver. 696:

But more: this hollow, fiery mountain's side
The sea still washes with impetuous tide;
And, passing through the pores, *the flame retires,*
The pressing waters drive the yielding fires,
And force them out.

The idea of a body of fire retreating before a body of water, and being forced upwards in a perpendicular line to an immense height, instead of intermingling with the water, is absolute nonsense. The passage, properly understood, makes no express mention of water whatever, although it is natural to conceive that Lucretius admitted that some portion of water must be perpetually imbibed from these apertures of the mountain opening into the ocean. But his direct assertion is, that the stern and craggy base of the mountain rejects, at every encounter, the waves that are urged against it; and that, during the retreat of such waves, additional stores of air, alternating with the waves themselves, enter at its orifices.

Marchetti follows the common interpretation: but De Coutures adheres so fully and satisfactorily to the sense I have given the passage, that I cannot avoid quoting him. "La mer," says he, "brise ses vagues contre une grande partie de ce mont fameux, et son flot qui frappe ses racines, retourne aprés son agitation dans son sein: c'est par là que le vent se glisse dans les cavités qui donnent passage à sa violence, jusqu'à l'ouvreture de la montagne; c'est assurement ce qui favorise son entrée, car profitant de la retraite de l'onde, il y fait une violente invasion."

Ver. 726. ——*the whirlwind craters throng,*
By us term'd aptly its voracious jaws.] The word *crater* is Greek, and signifies a cistern, or basson; the Romans termed these superior apertures *fauces*, or *ora*, jaws, or mouths. In these craters, or jaws, there is often traced some considerable vortex or whirlwind of air; and our poet seems to suppose that no small quantity of air is also absorbed or sucked in from these violent tornados.

Conspicias hominis, fit ut omneis dicere caussas
Conveniat leti, dicatur ut illius una.
Nam neque eum ferro, nec frigore, vincere possis
Interiisse, neque a morbo, neque forte veneno;
Verum aliquid, genere esse ex hoc, quod conscius dicet,
Scimus: item in multis hoc rebus dicere habemus.
Nilus in æstatem crescit, campisque redundat,
Unicus in terris, Ægypti totius amnis:
Is rigat Ægyptum medium per sæpe calorem;
Aut, quia sunt æstate Aquilones ostia contra,
Anni tempore eo, qui Etesiæ esse feruntur;
Et, contra fluvium flantes, remorantur; et, undas

Ver. 737. ——*pride of* Egypt's *plains:*
Sole stream on earth its bound'ries that o'erflows]
In the original, thus, ver. 712:

——campisque redundat,
Unicus in terris, Ægypti totius amnis.

I have given the interpretation contended for by Mr. Wakefield, as far bolder, and more energetic than the common version: "*The* river of all Egypt," by way of eminence, "which *alone* throughout all the world overflows, &c." The translation in general use is thus offered us by Guernier: The Nile, the *only* river in all Egypt, overflows, &c." In corroboration of the version now offered, the Hindus denominate the enormous stream that rolls through the eastern provinces of their country, The Ganges; the word *Ganga* in Hindustanee meaning *a river:* and thus also, in the Jewish scriptures, the Nile itself is denominated *Nachal Misraim*, "*the* river of Egypt, or *the great city*," meaning Cairo, which is the capital of Egypt: Mesr (مصر) being still used in Persian and Arabic, to signify, generally, a capital or metropolis: while Isaiah, ch. xxiii. 3. calls it, יאור, "*the* river," absolutely and indefinitely.

זרע שחר
קציר יאור תבואתה:
The seed of the Nile,
The harvest of the River, was her revenue.

The Nile, however, is not, strictly speaking, the only river in the world subject to a periodic exundation; for the same fact occurs to all rivers which have either their origin or channel within the tropics; since the same northern monsoon, the Etesian wind, of which our poet here speaks, acts equally upon all of them, and blowing fully in the mouth of their streams, obstructs their passage to the ocean, and thus compels them to overflow their banks for many miles round. But, in consequence of the diminution, and, indeed, insignificant size of the generality of those known to exist in the æra of our poet, in comparison with the Nile, their periodic deluges were seldom or never adverted to by the natural historians of his own time.

The cause of this wonderful phænomenon, as stated in the text before us, is truly philosophic, and, for the most part, has been progressively confirmed by the observations of every subsequent age. The Etesian monsoon,—denominated Etesian from the punc-

Stretch'd o'er the ground, full many a cause thy mind
Must state whence fell it ere it state the true.
For whether poison triumph or disease,
Cold, or the sword, it ne'er can prove remote;
Though of such deaths thou learn, from these inform'd,
One here prevail.—Thus judge of things at large.
The Nile now calls us, pride of Egypt's plains:
Sole stream on earth its bound'ries that o'erflows
Punctual, and scatters plenty. When the year
Now glows with perfect summer, leaps its tide
Broad o'er the champaign, for the north-wind now,
Th' Etesian breeze, against its mouth direct

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tuality of its annual return, ἔτος signifying a year,—commences in the middle of the summer solstice, blows full from the north against the current of the stream, which has a southerly origin, and obstructs its accustomed passage into the Mediterranean. At the same time that it repels the river in this manner, by agitating the waves of the ocean, in one undeviating direction, it forces along with them, towards the mouth of the channel, immense heaps of sand, which contract the diameter of its embouchure, and thus produce an additional obstruction: while, again, by blowing a perpetual drift of clouds towards the mountains of Upper Ethiopia, where the Nile springs from its cradle, it supplies, by their condensation and conversion into rain, the streams that first feed it with an increased quantity of water, and thus affords it a still ampler excess.—To this general cause, our poet adds, also, an additional source of overflow from Anaxagoras; to wit, that the snows on the summits of the mountains in the moon, as they are called, which are situated in Upper Egypt, are dissolved in these summer months, and thus considerably contribute towards the fertile flood of the season. For the origin of monsoons, or periodical winds in general, see Note on Book V. ver. 661.

Ver. 741. ——*for the north-wind now,*
Th' Etesian *breeze,*——] Fayus has absurdly asserted this monsoon to be a south-wind: but our poet is so extremely pointed, that, from a confusion of his own ideas alone, can I conceive the critic to have misunderstood him. The general calculation of both Copts and Egyptians is, that the rise of the Nile commences on the [illegible] of June, the time precisely fixed upon [illegible] by Lucretius himself. From accidental circumstances, its incipient swell is sometimes, however, protracted a few days, when the ignorant and superstitious natives, attributing the delay to some [illegible] of their own, which has excited the [illegible] stream, betake themselves to [illegible], and every species of fanatical absurdity. These religious ceremonies continue for several days, and nothing but a miracle can prevent the [illegible] annual and salubrious flux by the time they are [illegible].

Cogentes sursus, replent, coguntque manere.
Nam, dubio procul, hæc advorso flabra feruntur
Flumine, quæ gelidis ab stellis axis aguntur:
Ille ex æstiferâ parte venit amnis, ab Austro
Inter nigra virûm percocto secla colore,

pleted; a return, nevertheless, as may naturally be supposed, which by themselves is referred to the prevalence of their own devotional rites, and the restoration of the favour of the Genius, or God of the river.

Ver. 748. ——*while rolls the Nile adverse*
Full from the south, from realms of torrid heat,]
The astonishing length of this river, from its earliest sources, which is calculated at upwards of three thousand miles, together with the barbarism and stupidity of the inhabitants on its banks, has rendered it, in all ages, extremely difficult to be traced; and among many geographers of Greece and Rome, as well as among the greater number of their poets, the discovery of its rise was believed an impossibility. Homer, therefore, boldly, and at once, calls this celebrated stream "a river descending from heaven," and in the Jewish scriptures it is stated to have its rise in Paradise. Herodotus travelled four months in search of its origin, but at length relinquished his pursuit, as altogether fruitless. Alexander the Great and Ptolemy Philadelphus both re-attempted the discovery, by persons well skilled in the geography of their day, who were dispatched for this express purpose, but who, nevertheless, like Herodotus, travelled and inquired in vain. Pomponius Mela declared, that it arose in the Antipodes; Pliny, from a mountain of the Lower Mauritania; Euthymenes, from the Atlantic ocean, running, in consequence, through the very heart of Africa, and dividing it into two continents. Senec. lib. iv. Plut. Placit. Phil. iv. 1. See also Strab. lib. xvii. and Diod. Sic. lib. i. While, according to Vossius, de Ætat. Mund. the more general opinion was that the Nile derived its source eastwards, and indeed from India itself: an opinion apparently accredited by Virgil:

Quaque pharetratæ vicinia Persidis urget,
Et viridem Ægyptum nigrâ fœcundat arenâ,
Et diversa ruens septem discurrit in ora
Usque coloratis amnis devexus ab Indis.
Georg. iv. 290.

And where the stream from India's swarthy sons,
Close on the verge of quiver'd Persia, runs,
Broods o'er green Egypt with dark wave of mud,
And pours, through many a mouth, its branching flood. Sotheby.

Our poet deviates from all these opinions; he had carefully perused the various accounts of the different travellers who had been dispatched on expeditions of discovery; had compared their accounts together; and selected what appeared most plausible. And the accuracy and distinct knowledge of the source and course of the Nile, which he hence acquired, when examined by the histories of later and successful investigators, is truly astonishing. He does not, indeed, with Bruce and Lobo, point out the exact spot from which the earliest of its springs issues; he makes no mention of the mountains of the moon; the lake Zambre, or Dambea, that spreads at their basis, and collects the first waters of the Nile from several different rivulets into one ample sheet; nor does

Blows with perpetual winnow; every surge
Hence loiters slow, the total current swells,
And wave o'er wave its loftiest bank surmounts.
For that the fixt monsoon that now prevails
Flows from the cold stars of the northern pole
None e'er can doubt; while rolls the Nile adverse
Full from the south, from realms of torrid heat,

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he state the precise latitudes whence these rivulets originate. His description is too short and general for such minute particulars, but it is at the same time so pointed and characteriſtic, that, had our own countryman Bruce travelled with no other instructions in his pocket than what the present account of Lucretius affords, he could scarcely have failed in his investigation, or deviated from his proper course. He tells us, that it originates in the south, in realms that lie near the burning heat of the equator, and are inhabited by the negro-tribes of Ethiopia:

Ille ex æstiferâ parte venit amnis, ab Austro
Inter nigra virûm percocto secla colore:

to which he adds, that its extreme springs first bubble forth still nearer to the line:

Exoriens penitus mediâ ab regione diei.

These springs are now found to originate in about the twelfth degree of north latitude: and it is highly probable, that, in the two former verses, our poet refers to their first collection in the lake Dambea; for, notwithstanding the general want of success with which this subject was investigated in ancient times, it is obvious, from this history of Lucretius, that much genuine and accurate knowledge was acquired in the aggregate; and there can be no doubt that this very lake had been actually explored. Ptolemy makes mention, indeed, of two lakes in this very quarter, whence, he asserts, that the Nile originates; but the testimony of Pliny is more satisfactory still. Nero, he tells us, Hist. Nat. vi. 6. dispatched two centurions, accommodated with every convenience, to ascertain the rise of this mysterious stream: and adds, that on their return home, he expressly heard them assert, ad ulteriora quidem pervenimus, ad immensas paludes, quarum exitum nec incolæ noverant, nec superare quisquam potest, "we at length reached some immense lakes, whose termination the bordering inhabitants were unacquainted with, and which had baffled every possible inquiry." The magnitude of the Dambea, or as the natives of Abyssinia denominate it, the sea of Tzana, which, according to Lobo, is ninety miles long, and thirty-six broad, and not less extensive according to Bruce, calculating, at least, from his general map,—for the statement in his text differs from the chart nearly a degree in length,—might justify such an assertion in a people so extremely ignorant as those from whom the Roman centurions obtained their information; and beholding, as they must have done, this expanse of water intersected with a variety of islands, for the Dambea contains not less than twenty-one, they might naturally conceive, that it consisted of several, instead of one individual lake.

It is now worth while to compare this description of our poet with the following of Thomson:

——with annual pomp
Rich king of floods! o'erflows the swelling Nile.
From his two springs in Gojam's sunny realm,
Pure-welling out, he through the lake
Of fair Dambea rolls his infant stream.
There, by the Nayads nurs'd, he sports away
His playful youth amid the fragrant isles,
That, with unfading verdure, smile around
Ambitious, thence the manly river breaks;

Exoriens penitus mediâ ab regione diei.

Est quoque, utei possit magnus congestus arenæ
Fluctibus advorsis obpilare ostia contra,
Quom mare, permotum ventis, ruit intus arenam;
Quo fit utei pacto liber minus exitus amnis,
Et proclivis item fiat minus inpetus undis.
Fit quoque, utei pluviæ forsan magis ad caput ejus
Tempore eo fiant, quo Etesia flabra Aquilonum
Nubila conjiciunt in eas tunc omnia parteis.
Scilicet ad mediam regionem ejecta diei
Quom convenerunt, ibi ad altos denique monteis
Contrusæ nubes coguntur, vique premuntur.
Forsit an Æthiopum penitus de montibus altis
Crescat, ubi in campos albas descendere ningues
Tabificis subigit radiis sol, omnia lustrans.

Nunc age, Averna tibi quæ sint loca quomque lacusque,
Expediam; quali naturâ prædita constent.
Principio, quod Averna vocantur nomine, id ab re

And gathering many a flood, and copious fed
With all the mellow'd treasures of the sky,
Winds in progressive majesty along:
Through splendid kingdoms now devolves his maze;
Now wanders wild o'er solitary tracts
Of life-deserted strand; till glad to quit
The joyless desart, down the Nubian rocks
From thundering steep to steep, he pours his urn,
And Egypt joys beneath the spreading wave.
Summer, 804.

Ver. 758. —*th'* Etesian fans, *now wide unfurl'd,*] In the original, v. 730:

Etesia *flabra* Aquilonum:

an elegance of imagery which has not passed un-

Haunts of the Ethiop-tribes; yet far beyond
First bubbling, distant, o'er the burning line.
Then ocean, haply, by th' undevious breeze
Blown up its channel, heaves with every wave
Heaps of high sands, and dams its wonted course:
Whence narrower, too, its exit to the main,
And with less force the tardy stream descends.
Or, tow'rds its fountain, ampler rains, perchance,
Fall, as th' Etesian fans, now wide unfurl'd,
Ply the big clouds perpetual from the north
Far o'er the red equator; where condens'd,
Pond'rous, and low, against the hills they strike,
And shed their treasures o'er the rising flood.
Or, from th' Ethiop-mountains, the bright sun
Now full matur'd, with deep-dissolving ray
May melt th' agglomerate snows, and down the plains
Drive them, augmenting, hence, th' incipient stream.
But come th' Averni beckon; and the muse
Their nature, next, their depths, their lakes shall pierce.
And first their name from power adverse to birds

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noticed by poets of modern day. Thus, Milton, when speaking of the soft, aërial sleep of Adam in a state of innocence:

——which th' only sound
Of leaves, and fuming rills, *Aurora's fan*,
Lightly dispers'd. Par. Lost, v.

In the same manner, Dryden:

The *fanning wind* upon her bosom blows
To meet the *fanning wind* her bosom rose;
The *fanning wind*, and purling streams, continue
her repose. Cymon and Iphigen.

But the use of this beautiful metaphor is more spirited still in the following from Sir Wm. Jones's translation of a Hymn to the Genius of Odours, by Bocarez, an Arabian poet:

Inpositum est, quia sunt avibus contraria cunctis,
E regione ea quod loca quom venere volantes,
Remigiom oblitæ, pennarum vela remittunt,
Præcipitesque cadunt, molli cervice profusæ,
In terram, si forte ita fert natura locorum;
Aut in aquam, si forte lacus substratus Averni.
Is locus est Cumas apud; acri sulfure montes
Obpletei calidis ubi fumant funtibus auctei.
Est et Athenæis in mœnibus, arcis in ipso
Vertice, Palladis ad templum Tritonidis almæ,
Quo numquam pennis adpellunt corpora raucæ
Cornices; non, quom fumant altaria donis.

Yield to desire! O! quit restraint,
In life's delicious Eden faint;
While *aloey fans the gales employ*,
And odours heighten nature's joy.

Ver. 769. *And first their name from power adverse to birds*
Draw they:——] The Averni are caverns in the earth, opening externally, and emitting an effluvium injurious to animal life, but particularly to the life of birds; whence they derive their name; ἀ being a privative particle, and ὄρνις signifying "a bird." Of these Averni our poet notices three, all of which were conceived, by the multitude, to be the immediate portals to the infernal rivers and regions. The whole of these circumstances are thus related by Virgil:

Spelunca alta fuit, vastoque immanis hiatu,
Scrupea, tuta lacu nigro nemorumque tenebris;
Quam super haud ullæ poterant impune volantes
Tendere iter pennis: talis sese halitus atris
Faucibus effundens supera ad convexa ferebat;
Unde locum Graii dixerunt nomine Avernum.
Æn. vi. 238.

Deep was the cave, and downward as it went,
From the wide mouth, a rocky, rough descent;
And here th' access a gloomy grove defends;
And here th' unnavigable lake extends,
O'er whose unhappy waters, void of light,
No bird presumes to steer his airy flight;
Such deadly stenches from the depth arise,
And steaming sulphur, that infects the skies.
From hence the Grecian bards their legends make,
And give the name Avernus to the lake.
Dryden.

Ver. 772. *Their pinion'd oars*,——] Hence, Ovid:

Posse super fluctus *alarum insistere remis*
Optastis. Met. v. 558.

On *pinion'd oars* o'er ocean would ye fain
Urge your bold voyage.

Virgil has paid due attention to the whole of this most exquisite delineation, and that in a variety of places. The following affords us one instance:

——volat ille per aëra magnum
Remigio alarum. Æn. i. 304.

Draw they: for when the feathery people once
Touch but their confines, instant they forget
Their pinion'd oars, their plumy sails relax,
And down, plumb down, profuse, with fluent neck
Plunge they to earth, if earth their bottom form,
Or into pools, if pool the mystic depth.
Such the dread gulf at Cumæ, belching high
Fumes of hot sulphur o'er the mountains round.
Such, too, at Athens, deep within her walls,
Steams from the tower, Minerva's temple near;
Where never raven, e'en when victims smoke
O'er the red altar, shows his jetty plumes.

With *pinion'd oars* through heaven's vast vault he sails.

The ensuing Note offers another example:

Ver. 773. *And down, plumb down, profuse, with fluent neck*] Nothing, perhaps, can equal the beautiful imagery of the text, ver. 744.

Præcipitesque cadunt, molli cervice profusæ.

It is well remarked by Havercamp, that this inimitable verse is thus referred to by Virgil, but the copy falls far short of the original:

Ad terramque *fluit* devexo pondere cervix.
Georg. iii. 524.

Down *flows* his neck with passive weight to earth.

The whole of this passage appears to me to have been in the recollection of Milton, when describing the descent of Satan through the gulf that separates heaven from hell. But, as I shall be under the necessity of returning to this description soon, I shall now only quote the part that corresponds to the verse in question:

——all unawares
Fluttering his pennons vain, plumb down he drops
Ten thousand fathoms deep.
Par. Lost, ii.

Ver. 776. *Such the dread gulf at* Cumæ, *belching high*
Fumes of hot sulphur o'er the mountains round.] I read, with Mr. Wakefield, from the amended copy of Salmasius, ver. 747:

Is locus est Cumas apud; acri sulfure montes
Obpletei calidis ubi fumant fontibus auctei.

Perhaps, in all the questionable passages of Lucretius, there is no one that has been so much contested, and that has so much exercised the critical skill of his editors and commentators: so widely different are the readings in the different manuscripts, and so completely unintelligible every one of them. It is useless, however, to quote them: those who have a curiosity to compare them together, may consult the edition of Faber, who has collated, and critically examined eight or ten: and at last agrees with

Usque adeo fugitant, non iras Palladis acreis,
Pervigilii caussâ, Graiûm ut cecinere poëtæ;
Sed natura loci opus ecficit ipsa suâpte.
In Syriâ quoque fertur item locus esse, videri,
Quadrupedes quoque quo, simul ac vestigia primum
Intulerint, graviter vis cogat concidere ipsa,
Manibus ut si sint divis mactata, repente.
Omnia quæ naturali ratione geruntur;
Et, quibus e fiant caussis, adparet origo:
Janua ne posita hiis Orci regionibus esse
Credatur; post hinc animas Acheruntis in oras
Ducere forte deos Maneis inferne reamur:
Naribus alipedes ut cervei sæpe putantur

Lambinus, that they are either altogether spurious, or ought to be amended thus:

Qualis apud Cumas locus est montemque vcsevum,
Oppleti calidis ubi fumant fontibus auctus;

which pretended correction has been hitherto almost uniformly followed by both editors and translators. The great objection to it, however, is, that it deviates most unpardonably in the first half of the first line from all the manuscripts, which unanimously concur, thus far, in using the same terms, and terminate the line either with *montes* or *montis*, occurring thus, consistently with Salmasius:

Is locus est Cumæ apud . . . . montes (or montis.)

and the blank is variously filled up with *et visui per*,—*acris vapor—ejus sub pede—etruscos sub—etrisui per*—and many other expressions, equally different from each other.

Ver. 786. ——*o'er whose dire domains*
The brute that treads drops instant,——] Lambinus conjectures that our poet is not in this place referring to an Avernus in the province of Syria Proper, but to that entitled Plutonium in Hierapolis, in the province of Cœlo-Syria, of which Strabo gives a particular account in lib. xiii. But caverns emitting azotic vapour are by no means confined to any individual country, and may have existed in both these provinces. The Grotto del' Cani, in the vicinity of Naples, has acquired more celebrity than even the Plutonium, and is precisely of the same species as this individually selected by Lucretius, as existing in Syria. Our poet is strictly philosophic in his mode of accounting for the baneful effects of these extraordinary caverns; and the same reason will hold, why brutes, more particularly, were the subjects of the fatal influence of the Syrian avernum, that is offered by every natural philosopher of the present day with regard to a similar effect in the Neapolitan grotto, to wit, that the fixed air, or *choke-damp*, as it is generally termed, is so much heavier than atmospheric air, that it seldom rises above a foot or two above the surface of the earth; whence brutes in

Yet not restrain'd, as Grecian poets sing,
By wrath of Pallas o'er the tell-tale spy
Profusely lavish'd, but the place alone.
Such place in Syria, too, as fame reports,
The trav'ller traces, o'er whose dire domains
The brute that treads drops instant, as though fell'd
In prompt oblation to th' infernal powers.
These all subsist from Nature's gen'ral laws,
And whence their source their earliest rise unfolds;
Lest we should judge them the first gates of hell,
And through such portals deem th' infernal gods
Draw the pale spirit to the shades below;
As, with their breath, the foot-wing'd deer, 'tis said,

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general, and especially those of the more diminutive classes cannot avoid breathing the projected effluvium, and must necessarily be destroyed. That this is the immediate cause of their destruction is well known, because men, and other animals whose lungs have accidentally imbibed the poisoned air, have been suffocated in the same manner. Azotic gass, confined by its specific weight to the bottom of mines or beer casks, produces a choke-damp of a similar description; and hence, such vessels or caverns, may be regarded as so many temporary or factitious averni.

Ver. 791. *Lest we should judge them the first gates of hell,*
And through such portals deem th' infernal gods] The elegant machinery of Klopstock supposes, as I have before observed, the existence of an infernal world, situated in the very centre of earth itself, which it represents as excavated for this express purpose. But contrary to the mythology of Greece and Rome, the German poet places in these central or infernal habitations, the regions of the blest: here perpetual suns diffuse their rays; perpetual odours wave their wings; and a perpetual paradise unites with the verdure of the fairest spring, the fruits of the most luxurious autumn. His entrance into these spiritual abodes, however, he has obviously taken from the popular idea of the Grecian averni; but he removes the mysterious passage to as great a distance from the prophane eye of mortals as the bulk of the globe itself will admit; and instead of fixing it at Naples, Cumæ, Athens, or in the more distant province of Syria, places it in the central regions of midnight, and the utmost extremity of the north-pole:

In dem stillen bezirk des unbetrachteten nordpols
Ruhet die natternacht einsiedlerisch, saumend; und wolken
Fliessen von ihr, wie ein sinkendes meer, unaufhörlich herunter Messias, i.

In the still circle that the north-pole girds
Ne'er trac'd by man, dwells Midnight, loit'ring, lone,
And hermit-vested: clouds around him flee
Perpetual, deep, and boundless as the main

Ducere de latebris serpentia secla ferarum.
Quod procul a verâ quam sit ratione repulsum,
Percipe: namque ipsâ de re tibi dicere conor.
Principio, hoc dico, quod dixi sæpe quoque ante,
In terrâ quoiusque modi rerum esse figuras:
Multa cibo quæ sunt vitalia; multaque morbos
Incutere et mortem quæ possint adcelerare:
Et magis esse aliis alias animantibus aptas
Res ad vitaï rationem, obstendimus ante,
Propter dissimilem naturam, dissimileisque
Texturas inter sese, primasque figuras:
Multa meant inimica per aureis, multa per ipsas
Insinuant nareis, infesta, atque aspera tactu:
Nec sunt multa parum tactu vitanda, neque autem
Adspectu fugiunda, saporeque tristia quæ sint.

Ver. 794. ——*the foot-wing'd deer,*——] An elegant and appropriate image, *alipedes;* but which appears to have been more frequently noticed and approved by the poets of Germany than of any other nation with which I am acquainted. Among these, the metaphor indeed seems to be altogether naturalized. Thus Gesner, Death of Abel, i. towards the end. Itzt eilten sie, Freude beflügelte die füsse, unter die bäume. "Now hasten they, rapture *wings their feet*, to their shady bowers." In the following from Klopstock, there is an additional degree of spirit—a metaphor breathing the very quintessence of Pindar, or Hafiz:

——der angst geflügelte stimme. Mess. v.
——the *winged voice* of anguish.

Ver. 795. *Draw from the furze the spotted race of snakes;*] Whether or not our poet absolutely believed this vulgar rumour, or merely introduces it as a piece of elegant raillery on the credulity of many natural historians, we have no means of determining. That such a rumour was very generally accredited, both among the Greeks and Romans, we may fully persuade ourselves by consulting Pliny, lib. ii. 33, who adds, at the same time, that the breath of the elephant produces a similar effect. From the following passage in the Hitopadesa of Vishnusarman, it should seem that the same belief was as common in India as in Italy; and not improbably applied in the same manner to an explanation of the fatal effects of the local averni of the country: the translation is that of Sir William Jones. "As a *charmer draws a serpent from his hole*, thus a good wife, taking her husband from his place of torture, enjoys happiness with him. When a faithful wife hears her husband is dead in a distant country, she

Draw from the furze the spotted race of snakes;
A creed how false our numbers now shall prove.

First we maintain, then, and have earlier oft
Maintain'd the same, that Nature's primal seeds
In shape wide vary, whence the frame of things
Much holds nutritious, baneful much, and big
With certain fate; while different foods, to kinds
Different themselves, an ampler nurture yield,
As rear'd with bond, with texture rear'd unlike.
This have we erst decided. Sounds abhorr'd
Wound the vext ear; the shudd'ring nostrils drink
Oft atoms harsh and hateful to their smell;
Nor fewer far the bodies touch rejects;
Hostile to sight, or grievous to the taste.

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abandons life, and accompanies him. If he be bound in hell with the strongest chains, yet she takes him by the hand, and leads him to heaven by the force of her piety."

To the same effect, the Psalmist, lviii. 4, 5.

חמת למו כדמות חמת נחש
כמו פתן חרש יאטם אזנו׃
אשר לא ישמע לקול מלחשים
חובר חברים מחכם׃

Their poison is the poison of the serpent;
Of the deaf aspic that openeth not its ear,
Nor listeneth to the voice of the charmers,
However well skilled in incantations.

And why the snake should not be subject to a peculiar species of incantation, as well as possess such, it may be difficult to determine. That he does possess such a power over birds, and many other animals, not over man in particular circumstances of savage life, it would be ungenerous to doubt, after the concurrent testimony of respectable travellers to a variety of countries, as well as in a variety of æras. I shall quote but from one, and that one a late intelligent secretary to Lord Macartney: I mean Mr. Barrow, who, in his Travels into the interior of Southern Africa, thus expresses himself: "In the southern parts of Africa, where snakes are every where met with in great abundance, the fact, with regard to their fascinating power over birds, is so well known, that very few of the peasantry will hesitate to vouch for the truth of it from personal observation; but I have never heard it supposed here that the influence of the charm was extended to the human species, as has been asserted, seemingly on good authorities, to be the case in parts of Asia and North America." See, on the same subject, the Note in Book IV. 72;

Deinde, videre licet, quam multæ sint homini res
Acriter infesto sensu, spurcæque, gravesque.
Arboribus primum certis gravis umbra tributa;
Usque adeo capitis faciant ut sæpe dolores,
Si quis eas subter jacuit, prostratus, in herbis.
Est etiam magnis Heliconis montibus arbos,
Floris odore hominem tetro consueta necare.
Scilicet hæc ideo terris ex omnia surgunt,
Multa modis multis multarum semina rerum
Quod permixta gerit tellus, discretaque tradit.
Nocturnumque recens exstinctum lumen, ubi acris
Nidor subfundit nareis, tum cogit ibeidem
Concidere; ut pronos qui morbus mittere suevit.
Castoreoque gravi mulier sopita recumbit,

Ver. 811. *Thus there are trees whose shade malignant strikes*
With instant head-ach—] The odour or vapour issuing from many trees, will do this. Pliny asserts it of the walnut and the box-tree. Nat. Hist. xvii. 12, and xvi. 10. And it is probable, that even these may have such an effect upon some constitutions; but it is an effect which we do not find general in modern times. The syringa, and several other equally odorous shrubs, will, occasionally, operate in the same manner upon those who sleep beneath their branches.

Ver. 814. *While some, o'er* Helicon, *a blossom bear*
Of scent so deadly, few the smell survive.] The natural historians of Greece and Rome have not informed us of the name of the plants here referred to. But that such venomous kinds of vegetables might exist on the sides or summit of mount Helicon, we can easily conceive, from the existence of similar kinds in different parts of the world, at the present time. Thus, the Galbad samour of the deserts of Carmania in Persia, is said to communicate from its flower such a degree of poisonous odour to the surrounding atmosphere, that the very wind, as it flows over it, becomes imbued with the fatal effluvium, and proves a certain destruction to those who breath it in the vicinity of the shrub. But the blossoms of the Manchineel tree of the West Indies are more deleterious still. In the heat of the day it is dangerous even to touch them, on account of the moisture which exudes from their pores; yet it is even more dangerous to repose beneath them, from the quantity of farina that falls from their innumerable flowers. With the sap which issues from its trunk, after incisions have been made for this pur-

Then, too, how frequent things with power adverse,
Noxious to life, e'en man himself oppress.
Thus there are trees whose shade malignant strikes
With instant head-ach all, in idle hour,
Who loosely throw them on the grass beneath.
While some, o'er Helicon, a blossom bear
Of scent so deadly, few the smell survive.
These spring from earth; for earth within her holds
Innum'rous seeds of things innum'rous, join'd
In countless modes, and yields them as they blend.
The midnight taper, as its dying snuff
Pours o'er the nostrils, stupefies with sleep
Deep as, the brain, when apoplexy numbs.
So stupid swoons the maid, too, who in hour
Of full, o'erflowing nature, castor gross

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pose, the natives poison their arrows almost beyond the power of recovery. And it has been demonstrated, from actual experiment, that the poison which has thus been communicated to the arrows, will retain its force for above an hundred years. The Bohun Upas of the island of Java, if the facts recorded of it be true, is possessed of a power still more strangely destructive than either of the above; for, not animals alone are said to become the prey of its most fatal effluvium, but even every shrub and blade of grass in its vicinity, so that wherever the Upas springs up, it produces a barren desert to a considerable extent around it, and flourishes in stern and gloomy solitude. It is, unquestionably, a deleterious tree, but its effects have been grossly exaggerated.

Ver. 820. *Pours o'er the nostrils, stupefies with sleep*] It is, at the same time, well observed by our poet, and well accounted for upon the principles of his own philosophy, not only that different substances may differently affect different classes of animals, but even individuals of the same class. And hence the following observation of Mr. Smellie, "An odour which is disgustful to one man, is highly grateful to another. I knew a gentleman, who was in the daily habit of lighting and putting out candles, that he might enjoy the pleasure of their smell. Few people, I suppose, would envy him." Philos. of Ancient History, Vol. I.

Ver. 823. ——*castor gross*
Scents, floating round;——] This example is

Et manibus nitidum teneris opus ecfluit ei,
Tempore eo si odorata est, quo menstrua solvit.
Multaque præterea languentia membra per artus
Solvunt, atque animam labefactant sedibus intus.
Denique, si calidis etiam contere lavabris
Plenior, et fueris solio ferventis aquaï;
Quam facile in medio fit utei des sæpe ruinas?
Carbonumque gravis vis, atque odor, insinuatur
Quam facile in cerebrum, nisi aquam præcepimus ante?
At, quom membra domûs percepit fervida, nervis

---

altogether omitted by Creech. The constitutions of different persons, as I have just observed, are very differently affected by different odours and effluvia. The smell of cheese, the smell of parsnips, as well as of many other esculents, will occasionally produce the effect here spoken of: but the odours of civet, castor, musk, and other antispasmodics of the same class, are generally far more powerful in their operation. "I have found," observes M. Virey, in his treatise on the Exhalations of living Animals, "that this perfume (musk), when triturated with liver of sulphur, became very powerful; insomuch, that it was not extraordinary to see *women*, and particularly those who were hysterical and nervous, *faint away at its smell*, in the same manner as that of civet occasionally produces a similar effect. The smell of musk has been known to produce a hæmorrhage in a man. The perfume of the musk ox (Bos Moschatus) is pungent in proportion to the heat of the climate it inhabits; hence, the best musk is brought from Tonquin, and the worst from Siberia, or other frigid countries, the perfume of which is so much decreased as to approach that of *castor*."

Ver. 824. ——*and from her graceful hands*
Drops, loosely drops the polish'd work she plies.]

Probably, as Mr. Wakefield observes, with his eye directed towards Homer:

Κωκυτου δ' ηκουσε, και οιμωγης, απο τυρ̣γου·
Της δ' ελελιχθη γυια, χαμαι δε οι εκπεσε κερκις.
Il. X. 447.

Now from the walls the clamours reach her ear;
And all her members shake with sudden fear:
Forth from her ivory hands the distaff drops.

From which passage, doubtless, Virgil:

——subitus miseræ calor ossa reliquit:
Excussi manibus radii, revolutaque pensa.
Æn. ix. 475.

An icy cold benumbs her limbs; she shakes;
Her cheeks the blood, her hands the web forsakes.
Dryden.

In the Gondibert of D'Avenant, there is a description somewhat similar, and peculiarly tender and pleasing, though stiffened, according to the custom of the day, with a recondite and scientific metaphor: it refers to the fair Rhodalind:

Yet sadly is it sung that she, in shade,
Mildly as mourning doves love's sorrows felt;
Whilst, in her secret tears, her freshness fades,
As roses silently in lymbecks melt. Cant. i.

Scents, floating round; and from her graceful hands
Drops, loosely drops the polish'd work she plies.
But endless are the substances that, thus,
Melt all the members, and the soul subvert.
If long thou loiter in the public bath,
Or bathe at home o'erloaded with repast,
Wilt thou not faint, unsinew'd by the warmth?
Dies not each sense beneath the charcoal-fume
If from the brook we drink not ere they fail?
While the foul gass, that from fermenting must

How much more elegantly is the languid hue of the rose referred to in the following couplet of Garcilaso de la Vega:

Descolorìda estaba *como rosa*
Que ha sido fuera de sazon cogida.
Pale as the languid rose appears,
That art, before its season, rears.

Ver. 829. *Or bathe at home o'erloaded with repast,*] The luxury of bathing was carried to the utmost excess among the Romans. Their public baths were almost innumerable, and the more opulent had warm, hot, and cold baths at their own houses. It was customary with almost every one to bathe before eating; but with the more voluptuous to bathe afterwards as well. The debility too frequently produced by this latter practice is recorded in a variety of places by Horace, Juvenal, and Persius.

As an example, I take the following verses from the last of these poets:

Turgidus hic epulis, atque albo ventre lavatur,
Gutture sulphureas lente exhalante mephites;
Sed tremor inter vina subit, calidumque trientem
Excutit e manibus; dentes crepuere retecti;
Uncta cadunt laxis tunc pulmentaria labris.
Sat. iii. 98.

Gorg'd with the feast, his livid paunch he laves;
Foul, fetid vapours belching o'er the waves.
The glass still grasps he, but he grasps in vain,
His trembling hand o'erthrows the cordial bane;
His jaws, retracted, all his teeth disclose,
And from his lips th' ejected banquet flows.

Ver. 833. *While the foul gass, that from fermenting must*
Springs, like a blow deep stuns us with its force.]
In the Latin text, thus, v. 804:

At, quom membra *domûs* percepit fervida, *nervis*
Tum fit odor vini plagæ mactabilis instar.

The reading of different editions and manuscripts is extremely different. In the common copies it occurs thus:

At cum membra *hominis* percepit fervida *febris*,
Tum fit odor vini plagæ mactabilis instar.

Membra domûs is the lection of Pius, and of one of the codices in the British Museum; and Gronovius thus vindicates it. Obs. iii. 5. Agit de balitibus et odoribus cerebrum afficientibus, &c. "Lucretius is speaking of vapours and odours that affect the brain, and among others, appeals to the effects of a cellar filled with the gass of fermenting must, which, as every one knows, cannot possibly be

Tum fit odor vini plagæ mactabilis instar.
Nonne vides etiam terrâ quoque sulfur in ipsâ
Gignier, et tetro concrescere odore bitumen?
Denique, ubi argenti venas aurique sequuntur,
Terraï penitus scrutantes abdita ferro;
Qualeis exspiret scaptensula subter odores?
Quidve mali fit, ut exhalent aurata metalla?
Quas hominum reddunt facies, qualeisque colores?
Nonne vides, audisve, perire in tempore parvo
Quam soleant; et quam vitaï copia desit,
Quos opere in tali cohibet vis magna, necesse est?
Hos igitur tellus omneis exæstuat æstus;
Exspiratque foras in aperta, promptaque, cœli.
Sic et Averna loca alitibus submittere debent
Mortiferam vim, de terrâ quæ surgit in auras,

---

breathed, and strikes, as with an apoplexy, those who remain in the cellar too long, or enter it unconscious of the foul vapour it contains; for they instantaneously fall down, and are taken away apparently dead." The phrase *membra domûs*, signifies not the mere compartment alone in which the must is placed, and which is necessarily filled with its foul effluvium, but the adjoining parts of the building into which such effluvium is capable of penetrating. And this sort of phraseology was supposed to be peculiarly elegant among the Ancients: an instance of it occurs in Cicero ad Quint. Fratr. iii. 1. and another in Pliny, Epist. ii. 17.

The term *nervis*, I adopt from a happy emendation of Mr. Wakefield upon the manuscripts; the word made use of is generally *servus*, *servis*, or *fervis*:— the amended variation is trifling, and affords a complete meaning at a small expence. Havercamp ventures upon *ferme*, and Gronovius himself, with an alteration wider still, upon *mustum*.

But the change proposed, and adopted by Giffanius, is infinitely more wide and outrageous than any of these. He contends, that the entire couplet refers to the verse immediately before it, (in this translation, 832.); that it proposes two other modes of being released from the baneful effect of charcoal-fumes, and should be read interrogatively, thus:

Aut nisi membra *prius pertexit frigida servus?*
Aut sit odos vini plagæ *manabilis mora?*

And audacious as this lection appears, Marchetti, incapable of comprehending the common editions, has fully adopted it:

——o se le fredde
Membra innanzi non copre il fido servo?

Springs, like a blow deep stuns us with its force.
Then breeds not earth, imbedded in herself
Bitumens, sulfurs, ever steaming forth
In dews malignant? from the mines profound
Of gold, or silver, rise not such o'er those
Who delve, unblest, amid their rigid veins?
What ills hence issue! o'er the miner's limbs
What ghastly hues! what horrors o'er his face!
Hast thou not heard how soon existence fails,
How languid life, mid wretches thus condemn'd?—
These vapours all, earth genders in herself,
And breathes through many an op'ning to the day.

Thus breathe th' Averni through their openings dire
Fumes rear'd from earth, and fatal found to birds,

O se da' penetrabili suoi dardi
Con grato odor non ne difende il vino?

Our English translators, however, have not ventured beyond the common lection; but the version of Creech is so truly ludicrous, that I cannot avoid transcribing it. The reader will almost intuitively perceive, that the latter hemistich of the second line is altogether an offspring of his own, engendered from the dire necessity of rhyming:

To those whom fevers burn, the piercing smell
Of vigorous wine is grievous—*death and hell.*

Ver. 846. *Thus breathe th' Averni through their openings dire*
Fumes rear'd from earth, and fatal found to birds,] Having largely, and in a truly philosophic manner, expatiated on the origin and nature of poisonous odours and vapours, he now comes to apply the result of these observations to the peculiar phænomenon, that, of all animals, birds chiefly are affected by the effluvium proceeding from these baneful excavations; and, in doing this, he advances two solutions. First, that the effluvium emitted is injurious to the pennated tribes, from some unknown peculiarity in their construction; and, secondly, (See v. 856.) that it may possibly so impalpably dissolve the particles of the column of air situated immediately above the aperture, and of course so totally destroy its elasticity, that birds, whose power of flight depends upon this elasticity alone, must, necessarily drop down the excavation the moment they enter the limits of the vacant area. Perhaps this latter solution is the most ingenious of the two, though both are adequate to the effect produced

Ut spatium cœli quadam de parte venenet ;
Quo simul ac primum pennis delata sit ales,
Inpediatur ibei, cæco conrepta veneno,
Ut cadat e regione loci, quâ dirigit æstus :
Quo quom conruit hæc eadem vis illius æstûs,
Reliquias vitæ membris ex omnibus aufert.
Quippe et enim, primo quasi quemdam conciet æstum ;
Posterius fit, utei, quom jam cecidere veneni
In funteis ipsos, ibi sit quoque vita vomunda,
Propterea quod magna mali sit copia circum.
Fit quoque, ut interdum vis hæc atque æstus Averni
Aëra, qui inter aveis quomque est terramque locatus,
Discutiat, prope utei locus hinc linquatur inanis :
Quoius ubi e regione loci venere volantes,
Claudicat ex templo pennarum nixus inanis,
Et conamen utrimque alarum proditur omne.
Heic, ubi nictari nequeunt, insistereque alis,
Scilicet in terram delabi pondere cogit

That air may be dissolved, and its elasticity extremely diminished by a variety of substances, we know from the experience of every day. The vapour of water is sufficient ; extreme heat is sufficient ; and hence it is not very difficult to conceive the perpetual ascent from excavations like these, of a current of peculiar gass or aura, that may produce a total dissolution, and consequent inelasticity of the superincumbent column of air to no inconsiderable height, and hereby generate a sort of comparative vacuum.

Ver. 353. *A wontless thrill, a giddiness of brain*
First feel they, falling, till, profounder sunk,] Not dissimilar to this, the following of Gessner, Death of Abel, Book II. Da sah Eva zur seite einen vogel, wïe er ängstlich und mit traurigem geschrey in kleinen zirkeln umherflatterte, dann ohnmächtig mit bebendem gefieder auf einem niedern gesträuche sich setzte. "At her side Eve beheld a bird, at first fluttering about in small circles, filled with anguish, and uttering screams of distress, then, faint,

Tainting far round the heavenly breeze that blows.
Here, as the plumy people first approach,
The fluent bane arrests them, and below
Deep plunges headlong down th' envenom'd gulf,
Where their last pulse soon fails through every limb.
A wontless thrill, a giddiness of brain
First feel they, falling, till, profounder sunk,
Life flows amain, since more condens'd th' assault.

Then, too, perchance th' Averni may, at times,
With deadly blast the total air dissolve,
Full nigh to vacuum, 'twixt the flutt'rer spread
And earth beneath; whence, once the spot attain'd,
Vain prove his wings, each utmost effort vain
To prop the parent-body: robb'd abrupt
Of buoyant ether, powerless, and forlorn,

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and with tremulous plumes, dropping below to the utmost depth of the thicket."

Ver. 857. ——*the total air dissolve,*
Full nigh to vacuum,——] See Note on ver. 845. I have before observed, in Note on ver. 773, that Milton had his eye strongly directed to this entire painting of Lucretius, in his delineation of the descent of Satan towards the confines of Paradise. And I shall now cite the passage at fuller length, that my readers may judge for themselves, entreating them, at the same time, to join in the comparison, the verses of our poet from 770 to 773 of the Book before us:

——At last his *sail-broad vans*
He spreads for flight, and in the surging smoke
Uplifted, spurns the ground: thence, many a league,
As in a cloudy chair, ascending rides
Audacious; but, *that seat soon failing, meets*
A vast vacuity: all unaware
Fluttering his pennons vain, plumb down he drops
Ten thousand fathom deep.

Par. Lost, II. 927.

Natura; et, vacuum prope jam per inane jacentes,
Dispargunt animas per caulas corporis omneis.
Frigidior porro in puteis æstate fit humor,
Rarescit quia terra calore, et semina si qua
Forte vaporis habet, propere dimittit in auras:
Quo magis est igitur tellus ecfeta calore,
Fit quoque frigidior, qui in terrâ est abditus, humor.
Frigore quom premitur porro omnis terra, coitque,
Et quasi concrescit; fit scilicet in coëundo,
Exprimat in puteos, si quem gerit ipsa, calorem.

Esse apud Hammonis fanum funs luce diurnâ
Frigidus, et calidus nocturno tempore, fertur.
Hunc homines funtem nimis admirantur, et acri

Ver. 874. ——*temple*—
Of Jove Ammonian,——] This magnificent structure is now no longer in existence; it is succeeded by a more modern, and far less elegant and sumptuous pile of buildings. The change is thus described in Dyer's Ruins of Rome:

Behold yon steepy cliff; the modern pile
Perchance may now delight, while that, rever'd
In ancient days, the page alone declares,
Or narrow coin through dim cerulean rust.
The fane was Jove's, its spacious golden roof,
O'er thick-surrounding temples beaming wide
Appear'd, as when above the morning hills
Half the round sun ascends, and tower'd aloft
Sustain'd by columns huge, innumerous
As cedars proud on Canaan's verdant heights.

Ver. 875. ——*tepid through the night,*
And cold at noon-day:——] Of the existence of this curious fountain there can be no doubt. It is particularly described by Quintus Curtius, iv. 7. Pliny ii. 103, and Pomponius Mela, i. 8. It is also referred to by Silius Italicus, iii. 669, and by Ovid, in the following distich:

——medio tua, corniger Hammon!
Unda die gelida est; ortuque, obituque, calescit.
Met. xv. 309.

Thy stream, O horn-crown'd Ammon! in the midst
Chills us at noon, but warms at morn and eve.

The heat of this fountain was, unquestionably, supplied from subterranean inflammable substances in a state of combustion: its alternation of cold in the day-time may have been produced, and especially in the summer season, by evaporation from the groves that surrounded it, or by the recurrence of a regular hot tide, like the pool of Bethesda, described in St. John, v. 2—4. which seems to have been possessed of powers in many respects similar. The Roman foun-

Down, like a weight, he tumbles through the void,
And from each pore his airy soul exhales.
In wells profound the gurgling lympth that springs,
Springs chilliest in the summer:—for all earth
Expands beneath the sun-beams, and emits
The seeds of fire far prompter to the day:
Whence more her surface burns with heat evolv'd,
And colder flows the fountain deep-conceal'd.
While, mid the wintry frosts, her frame contracts,
Condenses closer, and, condensing, strains
The fiery atoms into caves and wells.
A fount, 'tis rumour'd, near the temple purls
Of Jove Ammonian, tepid through the night,
And cold at noon-day: and th' astounded sage

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tain was, probably, like the Jewish, a hot spring, with a tide recurring once in every twenty-four hours—with this only difference, that the tide of the latter returned about noon, and that of the former at sunset, or midnight.—Our own country has a great number of these extraordinary springs, but they are in general so well supplied with subterranean heat as to suffer no intermission whatever. The Weeden-well in the celebrated peak of Derbyshire, has an undoubted flux and reflux of its waters, but its tide is irregular; and it is not supplied with heat from below. The most extraordinary hot springs with which we are acquainted, are those at Geyser and Reikum, both in Iceland. Their heats return with their tides, but these tides, though irregular in their periods, recur so frequently as to prevent their waters from ever becoming cold. That of the former returns ten or twelve times in the course of the day, and such is its extreme calidity and consequent ebullition during these recurrences, that its waters are projected in a jet-d'eau, of not less than from five to ten fathoms of perpendicular height. The tides of the hot-springs at Reikum, for there are several, are renewed still more frequently, often indeed not less than two or three times in the course of a quarter of an hour. Their waters, on these occasions, although not projected to so great a height as those of the spring at Geyser, form, not unfrequently, a column of five or six ells perpendicular. The very curious hot-spring, described by Capt. Billings (Expedition to the Northern parts of Russia) near the volcano of Opalsk in Kamscatka, is so incessantly supplied with subterranean heat as to be permanently ebullient.

Our poet, in the pages before us, endeavours to account for these marvellous phænomena upon the principles of the Epicurean theory: but the truth is, we know so little of the interior structure of the earth, and the different causes of subterranean heats

Sole putant subter terras fervescere partim,
Nox ubi terribili terram caligine texit:
Quod nimis a verâ est longe ratione remotum.
Quippe, ubi sol, nudum contractans corpus aquaï,
Non quierit calidum superâ de reddere parte,
Quom superum lumen tanto fervore fruatur:
Quî queat hic, subter tam crasso corpore terram,
Percoquere humorem, et calido sociare vapore?
Præsertim, quom vix possit per sæpta domorum
Insinuare suum radiis ardentibus æstum?

Quæ ratio est igitur? Nimirum, terra magis quod
Rara tenet circum funtem, quam cætera tellus;
Multaque sunt ignis prope semina corpus aquaï.
Hoc, ubi roriferis terram nox obruit umbris,
Ex templo subtus frigescit terra, coitque:
Hac ratione fit, ut, tamquam compressa manu sit,
Exprimat in funtem, quæ semina quomque habet ignis;
Quæ calidum faciunt laticis tactum, atque vaporem.
Inde, ubi sol radiis terram dimovit obortis,
Et rarefecit, calido miscente vapore;
Rursus in antiquas redeunt primordia sedes

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and fires, that they seem to elude all possibility of satisfactory explanation upon any theory. There can be no doubt that they are in general produced by the inflammation of combustible substances: but the regularity of their alternations in some cases, and of their perpetual flow in others, creates a difficulty beyond the powers of philosophy to resolve. It is very extraordinary, that the *ice* in the celebrated cavern of Grace-Dieu, is plentiful and solid during the summer, and almost wholly wasted in the winter-season. M.

Stares at the fact, and deems the punctual sun
Strikes through the world's vast centre, as the shades
Of midnight shroud us, and with ray reverse
Maddens the well-spring:—creed absurd and false.
For if, full blazing o'er the naked tide,
Pour'd from above in fierce meridian might,
No heat he gender—how can his deep orb
Flame through earth's solid substance, and the lymph
Lash into fervour? how—since e'en at noon
Scarce can his rage the cottage-wall transpierce?
Dost thou the cause demand, then? clearly hence.
That round the fountain earth more spongy spreads
And seeds of fire throng ampler; whence, when night
Pours o'er the world his dew-distilling shades,
The chill'd, contracting soil here strains abrupt,
As though comprest by fingers, tow'rds the fount
Such seeds profusely, and the bubbling wave
Proves to the touch, the taste more tepid proves.
But when, revers'd, the sun with new-born beam
Earth rarefies, and quickens, back profound
Fly the young fire-seeds to their native haunts,

Cadet, in a paper inserted in the Annales de Chymie, vol. xlvi. has endeavoured to account for this anomaly, by the increase of cold produced by the evaporation from the moist and massy foliage that surrounds the cavern during the summer months. He has here, perhaps, given us the real cause of the variation in the temperature of the fountain before us, and to which I have attributed it in p. 548. but it is a cause scarcely adequate to the production of ice in summer, though it may make a warm stream colder in the day-time than at night.

Ignis, et in terram cedit calor omnis aquaï:
Frigidus hanc ob rem fit fons in luce diurnâ.
Præterea, solis radiis jactatur aquaï
Humor, et in lucem tremulo rarescit ab æstu:
Propterea fit, utei, quæ semina quomque habet ignis,
Dimittat; quasi sæpe gelum, quod continet in se,
Mittit; et exsolvit glaciem, nodosque relaxat.
Frigidus est etiam fons, supra quem sita sæpe
Stuppa jacit flammam, concepto protinus igni;
Tedaque consimili ratione, adcensa per undas,
Conlucet, quoquomque natans inpellitur auris:

Ver. 905. *A fount there is, too, which, though cold itself,*
With instant flare the casual flax inflames] This is, perhaps, a more extraordinary phænomenon than that of alternating hot springs. The account is confirmed, however, by Pliny, who adds, that it was situated near the temple erected to Jupiter at Dodona, ii. 103. "In Dodone Jovis autem fons, cum sit gelidus, et immersas faces extinguat, si extinctæ admoveantur, accendit." But this is not the only fountain of this nature of which Pliny makes mention; for in lib. xxxi. 2. he enumerates two more, the one in India denominated Lycos; and the other at Ecbatana, which is in like manner described by Solinus. Such may have existed, for any thing we can affirm to the contrary, and our author's reasoning upon the nature of their operations is at least consistent and ingenious. Even in modern chemistry, the approximation of different substances, that are highly charged with latent or elementary fire, the *fire-seeds* of Lucretius, although sensibly cold to the touch prior to their contact, will occasionally produce the effect here delineated, and burst forth into the most surprising and instantaneous blaze. But this phænomenon is more frequently produced by the admixture of vegetable oils with highly concentrated mineral acids, especially those of nitre and vitriol, than by the union of any other substances.

The springs here spoken of, consisted, in all probability, of pure liquid bitumen; or, if not, of springs on the surface of which liquid bitumen floated in large quantities. Such are by no means unfrequent both in our own country and abroad: the most remarkable, perhaps, among ourselves, is that at Pitchford in Shropshire, where the bituminous fluid bubbles forth from the earth like a fountain. In Italy they are more common still; and very general in the island of Barbadoes. But the most extraordinary bituminous springs, of which we have any account, are in the Birman empire. In the province of Arracan, major Symes met with a considerable clustre of them, the depth of whose wells was about thirty-seven fathoms, and the column of oil contained in them generally as high as the waist of those who descended for the purpose of collecting it. The Lycos of Pliny, which, as just observed, he places in India, was probably one of these very fountains. A lighted torch, or bundle of lighted tow, applied to any of these springs will immediately set the whole

The fount forsaking; whence the sparkling tide
Tastes in the day more frigid than at night.
Then, too, the crystal fluid, by the sun
Thrill'd, deep-dilates beneath his trembling ray,
And yields its embryo fires; as, when congeal'd,
Yields it alike its frost beneath the blaze,
Melts all its ice, and ev'ry bondage bursts.
A fount there is, too, which, though cold itself,
With instant flare the casual flax inflames
Thrown o'er its surface; and the buoyant torch

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surface in a blaze; and, perhaps, if such torch or tow be strongly impregnated with highly concentrated nitrous or vitriolic acid, they would produce the same effect even without being lighted. The essential oil that most certainly inflames when suddenly blended with these mineral acids, is that of turpentine, an oil of a nature extremely sulfureous; but still less so than bitumens themselves. It is probable, therefore, that in the case to which Lucretius alludes, the torch or tow made use of, was always previously impregnated, if not with nitrous or vitriolic acid, with some other substance possessed of a similar inflammability. The inhabitants of the Ligurian republic have lately employed, with great advantage, the petroleum of a spring recently discovered at Amiano, for the purpose of lighting their towns and cities: the petroleum is pure, its specific gravity to that of water being as 83 to 100; to oil olive as 91 to 100. In the neighbourhood has, also, been lately discovered a stratum of bituminous wood, which is of equal use as a fuel. It easily inflames, and gives a stronger heat than the charcoal of oak. Its cinders contain potash, oxid of iron, lime, and magnesia. See Annales de Chymie, vol. xlv.

It is to a tree, and a fountain of this description that Camoens refers in the following verses of his Lusiad; which I quote in further confirmation that I have here rightly conjectured the kind of spring adverted to by our own poet:

Ve naquella que o tempo tornou lĺha
Que tambem flamas tremulas, vapora,
A fonte que oleo mana, ed a maravilha
Do cheiroso licor, que o tronco chora.

Cant. x. 135.

Lo, gleaming blue o'er fair Sumatra's skies
Another mountain's trembling flames arise;
Here from the trees the gum all fragrance swells,
And softest oil a wondrous fountain wells.

Mickle.

Upon which verses we have the following observations by the Spanish commentator Manuel de Faria i Sousa. Deicho con Barros, Dec. ii. c. 6. c. 2. "Certo oleo de que em Pedir ha gram cantidade em hũa fonte que mana." Curanse con esto oleo; o azeyto, muchas enfermedades. Es natural: Milagrosamente se han visto muchas fuentes semejantes entre Catolicos: en Roma huva uno, de que aun agora si sabe sitio: en Portugal, hizo otra San Gonçalo en la villa de Amarante.

Nimirum, quia sunt in aquâ permulta vaporis
Semina; de terrâque necesse est funditus ipsâ
Ignis corpora per totum consurgere funtem,
Et simul exspirare foras, exireque in auras;
Non tam viva tamen, calidus queat ut fieri funs.

Præterea, disparsa foras, erumpere cogit
Vis per aquam subito, sursumque ea conciliare:
Quod genus, indu mari est Aradio funs, dulcis aquaï,
Qui scatit, et salsas circum se dimovet undas.
Et multis aliis præbet regionibus æquor
Utilitatem obportunam sitientibus nautis,
Quod dulceis, inter salsas, intervomit undas.

Ver. 916. ——*at times,*
Springs the fresh fount amid th' unbounded main,]
I read with Pius, the Cambridge copy, and an old fragment in manuscript, preserved carefully at Vienna, v. 890:

Quod genus endo mari spirat funs, dulcis aquaï
Quis scatit.—

Such also is the lection of the common editions. Vossius, however, and from him Mr. Wakefield, exhibit the text thus:

Quod genus, *indu mari est Aradio* funs, &c.

And to the same effect, M. de Guillet, in the following passage, who has also copied from Vossius:

Ainsi, de la mer même, et nourrie en son sein,
Toujours douce, toujours aussi pure que saine,
Jaillit, sans s'altérer, la source *Aradienne;*
Ainsi, sans partager l'amertume des flots,
Sur leur dos, en tous lieux, roulent mille ruisseaux,
Du Nocher altéré l'espérance et la joie.
Dodone, oui, c'est ainsi que ta source déplore
Ces feux qui réunis à l'étoupe, au flambeau,
Eux-même en recélant, mais comme en un tombeau,
S'irritent, et bientôt les allument sans peine.

The advantage of this variation does not occur to me on a careful perusal. Arados was an island in the Phœnician sea: but I do not know that the existence of such a fountain, as is here described, is corroborated by the writings of any of the ancient geographers. Pliny gives us examples of several such springs in other places; thus he adverts to one in Lydia, from a subterranean ebullition of the river Lycus, after it has cut the sea for many leagues, without uniting with its waters; and to another in Arcadia, from a similar current of the Erasinus, both of which are referred to by Ovid, Met. xv. 273, and hence had Arados furnished such a fountain, he

Kindles alike immediate, o'er its pool
Steering the course th' etherial breeze propels.
Nor wond'rous this; for countless seeds of heat
Throng through the water, rais'd from earth profound,
And thence, in turn, projected into air:
Yet ne'er so active as the wave to warm.
Some latent energy the seeds, moreo'er,
Thus scatter'd, forces to the water's brim
Sudden, and there concentrates; as, at times,
Springs the fresh fount amid th' unbounded main,
And drives the brine broad circling as it flows.
Nor thus unfrequent to the thirsty crew
Does bounteous nature ope the dulcet draught,
High-spouting freshness through the world of salt.

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would, probably, have noticed it as well. The most remarkable fountain of this kind, described by this too credulous naturalist, is that of Arethusa in the western part of the island of Ortygia, which he asserts, Lib. II. v. 107. to proceed from the Alpheus, in Peloponnesus; a stream that, after a long passage through the briny ocean, without mixing with it, dives suddenly beneath the surface of the earth, and, at length, breaks out into this celebrated well-spring of fresh water. To this same tradition Virgil alludes, Æn. iii. 694. but Strabo, with proper contempt, treats the whole as a fiction, Lib. VI.

That some streams, however, from the violence of their currents, are capable of entering a long way into a lake or sea, without intermingling with its waters, we well know from the reports of modern voyagers, who have given us a more definite, and authentic history. Thus the current of the Nile is distinguished from the more quiet flood of the Dambian lake in Abyssinia throughout the whole extent of its course, which exceeds six leagues. And that even springs of fresh water may burst forth from the bottom of seas or salt lakes with so strong a projectile force as to mount towards their surface without blending with the briny flood, will not appear extraordinary to those who have traced the existence of opposite currents in different parts of the ocean (concerning which, see the Note on Book V. v. 526.) or have seriously contemplated the ascent of columns of volcanic flames and lava from the very bottom of unfathomable seas, and the formation of new islands in their bosoms within the short space of four-and-twenty hours, in consequence of such eruptions. A large island was thus created near Tercera, one of the Azores, in December 1720: and Acroteri, the Cammeni, and great numbers of others in the Mediterranean, have originated from the same cause, and with equal velocity; several of them, indeed, in even less than twenty-four hours.

Sic igitur per eum possunt erumpere funtem,
Et scatere, illa foras in stuppam semina: quæ quom
Conveniunt, aut in tedaï corpore adhærent,
Ardescunt facile ex templo; quod multa quoque in se
Semina habent ignis stuppæ, tedæque, tenentes.
Nonne vides etiam, nocturna ad lumina linum
Nuper ubi exstinctum admoveas, adcendier ante,
Quam tetigit flammam; tedamque pari ratione?
Multaque præterea, prius ipso tacta vapore
Eminus ardescunt, quam conminus inbuat ignis.
Hoc igitur fieri quoque in illo funte putandum est.

Quod super est, agere incipiam quo fœdere fiat
Naturæ, lapis hicc' ut ferrum ducere possit,

Ver. 934. *And next explain we by what curious law*
The stone term'd MAGNET *by the* GREEKS, *attracts*] There is nothing in nature too recondite for the daring penetration of our poetic philosopher. The timid mineralogist of modern days cannot, without surprize, behold him thus undauntedly endeavouring to develope a bond, into whose mysterious union he himself feels totally unable to penetrate: and if, in pursuing his hardy footsteps, he perceive the bold speculator, at times, bewildered in a wrong path, he will seldom be able to point out to him a truer.

Hence, Polignac, to whose negative declaration, neither our poet, nor any modern philosopher, will, probably, object:

Miracula nondum
Omnia magnetis perspeximus; at mihi certum est
Magnetem non esse animal; nec amoris ab æstu
Ferratus trahere, ac secum vincire catenas.
ANTI-LUCR. v. 1156.

For not yet clearly are the wonders trac'd
Prov'd by the magnet; but to me most clear
Seems it no animal; nor led by bonds
Of mutual love t' attract and clasp the steel.

The ferruginous ore, here spoken of, for it is nothing else than ferruginous ore, with a saturation of magnetic aura, was denominated, as Lucretius observes, magnet, from its having been first noticed among the Magnetes, or inhabitants of Magnesia, a region of Lydia. It is also often entitled Herculeus lapis; either because it was first traced by Hercules, or detected in the vicinity of Heraclea; or, lastly, from the prodigious strength of its attraction. Lucretius, indeed, employs this latter term on no occasion, but Marchetti has introduced it into his version, with a view of varying his phraseology:

——l' Erculla pietra
Con incognita forza il ferro tragga.

So through the well-spring that the flax inflames
Burst forth the lurking fire-seeds to the day,
Commingling with its fibres; which achiev'd,
Or with the torch once blended, all is blaze;
Themselves alike high-charg'd with latent fire.
When, just extinct, the taper we apply
To one full blazing, see'st thou not how soon,
E'en ere it touch, th' extinguish'd snuff relumes?
Relumes not thus the torch, too? and alike
Full many a substance, useless to recount,
At distance kindled ere the flame arrive?
So acts the fountain, such the cause conceal'd.
And next explain we by what curious law
The stone term'd MAGNET by the GREEKS, attracts

Whether the ancients were acquainted with that most useful nautical instrument to which the properties of this stone have given birth, the mariner's compass, is in some degree doubtful. In modern Europe, we have no decisive knowledge of the existence of this instrument anterior to its use by Marco Polo, in 1260. Among the Chinese, however, it appears to have been employed immemorially: from which circumstance, many scholars of high reputation, and among the rest my learned and indefatigable friend the rev. T. Maurice, conceives that other ancient nations were in an equal degree acquainted with its utility. They contend, that it was known to the Druids, and that the cardinal points of what they call the Druidic *temples* at Stonehenge and Abury, were determined by the use of such a compass. In like manner, ascribing its name of lapis Heraclius, or Herculeus, to Hercules as its inventor, they conjecture it was known also to the Greeks; and that the golden cup which Apollo, or the Sun under that denomination, gave to Hercules, was nothing more or less than the mariner's compass-box, *by* which, not *in* which, the latter sailed over the vast ocean; they add also, that the golden fleece and the golden scyphus in the temple of Jupiter Ammon in Lybia, were nothing more than types of this curious instrument. I am afraid, however, there is more ingenuity in such conjectures than solid argument or historic fact: and in addition to the observations advanced on the other side of the question by Sir William Temple, Dr. Wotton, and Mr. Clarke, I cannot avoid remarking, that had this instrument been known in the time of Lucretius, he would not have failed to have adverted to it on the present occasion. But it is neither mentioned by Lucretius nor by Suidas.

The peculiar cause of union between magnetic pyrites and iron, or between two plates of iron, either or both of which are impregnated with magnetic ether, has never hitherto been satisfactorily ex-

Quem Magneta vocant patrio de nomine Graiei,
Magnetum quia sit patriis in finibus ortus.
Hunc homines lapidem mirantur, quippe catenam
Sæpe ex annellis reddit pendentibus ex se:
Quinque et enim licet interdum, pluresque, videre,
Ordine demisso, levibus jactarier auris,
Unus ubi ex uno dependet, subter adhærens;
Ex alioque alius lapidis vim, vinclaque, noscit:
Usque adeo permananter vis pervalet ejus.

Hoc genus in rebus firmandum est multa prius, quam
Ipsius rei rationem reddere possis;
Et nimium longis ambagibus est adeundum:

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plained, and perhaps is altogether inexplicable. Yet I cannot avoid observing, that the magnetic is not the only state in which iron seems to have a power of forcible attraction. M. De la Faille, an academician of Rouen, observes that the sea near Chatelaillon after a storm throws up a mud on which, in the course of a few days, appears a species of shell-fish, called griffites; and that, soon after, the whole hardens into a stone as solid as the hardest lime-stone. In many cases, calces of iron, minutely divided, form the whole of the cement here employed, or at least powerfully contribute to the cementing quality of other earths. "Zimmerman," observes Mr. Kirwan, "mixed one part filings of iron, and three parts sand, sprinkled, or rather covered them with water, and let them stand six months, at the end of which period he found the vessel burst by the expansion of the oxygenated iron, and the sand so firmly compacted, that the mass thus formed could not be broken, but by a chisel and hammer. Henckel Origine des Pierres, 405 in note: and that this induration may, and does take place at great depths in the sea, is evidently proved by the observations of Kinman. Mem. Stockh. 1770, related by Gadd, that an iron anchor, long deposited in the sea, had, hardened into stone all the sand, clay, and shells which surrounded it, to a pretty considerable distance; and is farther confirmed by a similar observation of Mr. Edward King, Phil. Trans. 1779, p. 35, that a violent storm having laid bare part of the wreck of a man of war that had been stranded thirty-three years before, several masses, consisting of iron, ropes, and balls, were found covered over with a hard substance, which upon examination appeared to be sand concreted and hardened into a kind of stone: that which concreted round the rope retained the impression of that part of the ring to which the rope was fastened, in the same manner as the impressions of extraneous fossils are often found in various strata. Also round the iron handle of a brass cannon that re-

Th' obsequious iron; magnet term'd since first
Mid the Magnetes men its power descried.
Vast is the wonder, mid th' admiring crowd,
This stone excites; for oft a pendent chain
Forms it of rings unlink'd and loosely join'd.
And frequent see they, sporting in the breeze,
Such rings quintupled, in succession long,
The lowlier cleaving to the sphere above,
And this to that, proclaiming, as it hangs,
Its deep-felt conscience of the magnet's power.
Such the resistless energy it boasts.
In facts like these full many a truth profound
First must we prove, ere yet their power thou trace,
And many a maze unravel;—thou with heed

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mained in the sea a much longer time, a much harder incrustation of sand was found, inclosing cockles, muscles, limpets, oysters, &c. all so firmly fixed and converted into a substance so hard, that it required as much force to break them as to break the fragment of any hard rock. Ib. 40, 41. It appears also, that a very small proportion of calx of iron is sufficient to produce induration when diffused through the mass of earthy matter, not only by the observation of Kinman, above related, but also by that of Mr. King, on the induration caused by the point of a nail, in the paper above quoted.—Stones, already formed, may be still further indurated by the infiltration of slightly oxygenated iron; thus, Dr. Fothergill having watered pieces of Portland stone with water impregnated with iron rust, found it in a few years to have acquired a sensible degree of such hardness as to yield a metallic sound, and resist any ordinary tool. Phil. Trans. 1799. 44." Kirwan's Geolog. Essays, p. 129. Iron therefore, under every form, appears to have a stronger attraction to earths than most other metals; but to magnetic ores, or pyrites impregnated with magnetic aura, it has a more powerful attraction than to any other substance.

Ver. 939. ——*for oft a pendant chain*] Lambinus has observed, that our poet, in this passage, appears to have had his memory directed to the following of Plato, in Ione, towards the beginning: Θεια δε δυναμις, ἡ σε κινει, ὡς περ εν τῃ λιθῳ, ἡν Εὐριπιδης μεν Μαγνητιν ωνομασεν, οἱ δε πολλοι, Ἡρακλειαν. Και γαρ αυτη ἡ λιθος ευ μονον αυτους τους δακτυλιους αγει τους σιδηρους, αλλα και δυναμιν ἐντιθησι τοις δακτυλιοις, ὡστε δυνασθαι ταυτο τουτο ποιειν, ὁ περ ἡ λιθος, ἀλλους αγειν δακτυλιους· ὡστε ἐνιοτε ὁρμαθος μακρος παν σιδηρων δακτυλιων ἐξ ἀλληλων ἡρτηται· πασι δε τουτοις ἐξ ἐκεινης της λιθου ἡ δυναμις ἀνἡρτηται.

Quo magis adtentas aureis, animumque, reposco.
Principio, omnibus a rebus, quasquomque videmus,
Perpetuo fluere, ac mitti spargique, necesse est
Corpora, quæ feriant oculos, visumque lacessant;
Perpetuoque fluunt certis ab rebus odores:
Frigus ut a fluviis, calor a sole, æstus ab undis
Æquoris, exesor mœrorum litora propter:
Nec variei cessant sonitus manare per auras.
Denique, in os salsi venit humor sæpe saporis,
Quom mare vorsamur propter; dilutaque contra
Quom tuimur misceri absinthia, tangit amaror.
Usque adeo omnibus ab rebus res quæque fluenter
Fertur, et in cunctas dimittitur undique parteis.
Nec mora, nec requies, inter datur ulla fluundi;
Perpetuo quoniam sentimus, et omnia semper
Cernere, odorari, licet, et sentire sonare.

Nunc omnes repetam quam raro corpore sint res
Conmemorare, quod in primo quoque carmine claret.

Ver. 954. ——*from the sun Thus heat exhales* ——] From this, to 13 verses below, we have a repetition of the passage in Book IV. 223, and following: ver. 958 alone exhibiting a trifling variation.

Ver. 958. ——*breezy air;*] In the Latin text:

——manare per *auras*.

And thus the verse whence the present is repeated, Book IV. 223:

List, then, for now thy closest ear we claim.
And, first, from all things bodies most minute
Flow forth for ever, scatter'd, and diffus'd,
Wounding the pupil, and compelling sight.
From forms defin'd spring odours; from the sun
Thus heat exhales; cold, dewy damp from streams,
And the rough spray from ocean, with fierce fang
Gnawing the mound that dares resist its waves.
Thus sounds, too, flutter through the breezy air;
And when the beach we traverse, oft the tongue
Smarts with the briny vapour; or, at hand,
If the bruis'd wormwood yield its acrid juice,
We taste th' essential bitter and abhor.
Thus some light effluence streams from all create,
Streams forth for ever, void of dull repose,
Tow'rds every point diffus'd; for man perceives
Where'er his station; sight alike exists,
The sense of fluent odours, and of sounds.
This thus premis'd, recal we next to mind
How rare the frame of all things, as erewhile
Conspicuous prov'd we in our earliest strain.

——volitare per *auras*.

The common editions, however, without any authority, have exchanged *auras* for *aures*, a term by no means more explicit, and infinitely less elegant.

Ver. 970. *Conspicuous prov'd we in our earliest strain.*] See Book I. 330, and following, where the substance of much that occurs here is stated on another account.

Quippe et enim, quamquam multas hoc pertinet ad res
Noscere, cum primis hanc ad rem protinus ipsam,
Quâ de disserere adgredior, firmare necesse est;
Nihil esse in promptu, nisi corpus mixtum in inani.
Principio, fit, ut in speluncis saxa superna
Sudent humore, et guttis manantibus stillent:
Manat item nobis e toto corpore sudor;
Crescit barba, pileique per omnia membra, per artus:
Diditur in venas cibus omneis; auget, alitque,
Corporis extremas quoque parteis, unguiculosque.
Frigus item transire per æs, calidumque vaporem,
Sentimus; sentimus item transire per aurum,
Atque per argentum, quom pocula plena tenemus.
Denique, per dissæpta domorum saxea voces
Pervolitant, permanat odos, frigusque, vaposque

Ver. 974. ——*the roofs of rocky caverns sweat With dews,*——] Hence Lucan, closely copying the passage:

Antra neque exiguo *stillant sudantia rore.*
Phars. iv. 309.

Nor sweating caves their oozy dew distil.

Ver. 986. *Heat that pervades e'en steel, and through the helm*] In the original, corresponding to this, and the three ensuing verses to the pause, I once more completely coincide in the corrected reading of Mr. Wakefield, ver. 953.

——qui ferri quoque vim penetrare sucvit
Denique, qua circum colli lorica coërcet.
Morbida visque simul, quom extrinsecus, insinuatur.

In the edition of Lambinus, these verses occur thus:

——*quin* ferri quoque vim penetrare sucvet
Undique, qua circum *corpus* lorica cocrcet;
Morbida vis *quæcunque* extrinsecus insinuatur.

Faber, Creech, and the succeeding editors in general, have followed this reading, every one of them, at the same time, objecting to it as incorrect and absurd, and proposing, in their annotations, some amendment of their own: amendments, however, which it is scarcely worth while to notice: they may be seen

A theme, though ever useful, useful most
Found, when compell'd, as now, to re-affirm
That nought exists but matter mixt with void.

For, first, the roofs of rocky caverns sweat
With dews, and crystals; and the frame of man
Throws through each pore the perspirable lymph.
Beard through the visage permeates, through each limb
Peeps the young down, and every meal imbib'd
Flows through the veins profuse, and feeds, augments
And quickens all things e'en to th' utmost nails.
Cold the tense brass, and heat alike transpierce:
So pierce they gold, and silver, as the vase
Proves, fill'd with fluids by the fingers clasp'd.
Through the stone wall voice winds its sinuous way,
And frosts, and odours, and the power of heat:

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in Faber and Creech, and several of them in Wakefield.

From the generally adopted lection of Lambinus, Creech thus attempts his English version; let the reader understand it, if he can:

—— into a well-closed room
The parts of odours, sounds, and heat will come:
And often, as our sickly soldiers feel,
The moist and subtle air creeps through their steel.

Guernier, dissatisfied with this interpretation of Creech, yet employing the same Latin text, translates thus: "The force of iron, thrown from without, will pass through iron, and search the soldier's limbs, though armed about with coats of mail." De Coutures, adhering to the same reading, gives us another idea, and thus briefly sums up the whole: Une cuirasse n'est point impenetrable aux coups qui viennent de dehors nous donner la mort. "A helmet is not impenetrable to the blows which aim at our life from without." I shall close with Marchetti's statement. He, too, translates from Lambinus, and more diffusely, but, I am afraid, with not much better success than the rest: he is speaking of the penetrable power of vapour:

——del ferro stesso
Non curar la durezza, e penetrarlo
Suol la, 've d'ogno intorno il corpo e cinto
Di fino usbergo, il contagioso morbo
Bench' ei venga di fuori.

Ignis: qui ferri quoque vim penetrare suëvit
Denique, quâ circum colli lorica coërcet.
Morbida visque simul, quom extrinsecus insinuatur:
Et tempestatem, terrâ cœloque coortam,
In cœlum terramque remote jure facessunt:
Quandoquidem nihil est, nisi raro corpore nexum.

Huc adcedit, utei non omnia, quæ jaciuntur
Corpora quomque ab rebus, eodem prædita sensu
Atque eodem pacto rebus sint omnibus apta.
Principio, terram sol excoquit, et facit are;
At glaciem dissolvit, et altis montibus altas
Exstructas ningues radiis tabescere cogit:

Ver. 989. ——*The red storm*
In heaven engender'd pierces earth profound;] Thus Klopstock:

——So wie sich ein donner in schweflichte berge
Himmelab stürzt, sie entzündet, dann neue donner versammelt,
Dan durch die tiefen, nunmehr ein ganzes gewitter, sich fortwalzt. Mess. iii.

So when th' ethereal flash its fury aims
Through rocks sulphureous, and their base inflames,
Deep, earth beneath, fresh peals of thunder roll,
And new convulsions threat the nether pole.

Ver. 990. *In heaven engender'd pierces earth profound;*
Or, if in earth it ripen, heaven above] No illustration can more happily demonstrate, that every material substance is porous and permeable:—the earthquake rends the heavens, and the thunder of the sky rends the earth. In both cases, the hard and solid crasis of the earth is equally proved penetrable. But the text is so differently written in different editions, and even manuscripts, that it is impossible to reconcile them, and almost impossible to deduce a meaning from any of them. From a long and diligent comparison of several of the best authorities with each other, I must take the liberty of proposing a new, and, as I trust, a more perspicuous reading than has hitherto appeared, and which I have made the basis of the present version, v. 956:

Et tempestates, terrâ cœloque coortæ,
In cœlum terramque, remotæ, jure facessunt.

Literally, "and tempests that are first brewed in the earth and in the sky, operate, by the same law, (*jure* videlicet *naturæ*), at a distance upon the sky and the earth."

Heat that pervades e'en steel, and through the helm
Rushes, where rests it round the fretted neck.
So rushes, too, contagion from without
Deep through each quiv'ring organ. The red storm
In heaven engender'd pierces earth profound;
Or, if in earth it ripen, heaven above
Shakes with the shock through all its shattering walls.
For nought combines through nature void of pores.
Then not unvarying in exterior shape
All atoms flow from all things; nor alike
On all things act they, with effect unchang'd.
The beam that burns and dries the moisten'd earth,
Fluxes the frost, o'er mountains pil'd sublime
Rolls, in loose tide, the macerated snows,

In all the common editions, we meet with the passage thus:

Et tempestates terrâ, cœloque coortæ
E cœlo emotæ, terraque repente facessunt.

This reading I do not pretend to understand, nor do I find any interpreter who has been more fortunate. Mr. Wakefield proposes as follows, and I have not chosen to deviate from his own reading in the Latin text above, although I have given my own lection in the version:

Et *tempestatem*, terrâ cœloque *coortam*
In cœlum terramque *remote* jure facessunt.

And he explains the couplet thus: "Philosophi merito remittunt in terram cœlumque eam tempestatem, quæ de terra cœloque primum est exorta." *i. e.* "In re dicunt tempestatem cæca corpora rursus in immensitate spatii recepta condi, atque evanescere." "Philosophers properly transfer again into the heavens and the earth the tempest which first originated in the heavens and the earth." "That is," continues he, "they justly assert, that the viewless particles that constitute tempests, are returned again into the immensity of space, and thus vanish away."

The alteration proposed by Faber is outrageously wide, even when compared with the Florence copy, which first suggested to him the idea. It occurs thus:

Nam tempestatem cælo terrave coortam
Vel ferri natura timet, circumque fatiscit.

I leave the reader to determine for himself.

Ver. 999. *Rolls, in loose tide, the macerated snows,*
And with its effluence melts th' adhesive wax.

Hence, Ovid, doubtless:

——*intabescere* flavæ
Igne levi *ceræ*, *matutinæve pruinæ*
Sole tepente, solent. METAM. iii. 48.

O'er dying embers melts the yellow wax.
The sun's first rays the morning rime dissolve.

Denique, cera liquefit in ejus posta vapore.
Ignis item liquidum facit æs, aurumque resolvit;
At coria et carnem trahit, et conducit in unum.
Humor aquæ porro ferrum condurat ab igni;
At coria et carnem mollit, durata calore.
Barbigeras oleaster eo juvat usque capellas,
Ecfluat ambrosiâ quasi vero, et nectare, tinctus:
Quâ nihil est homini quod amarius frundeat estu.
Denique, amaracinum fugitat sus, et timet omne
Unguentum; nam setigeris subus acre venenum est,
Quod nos interdum tamquam recreare videtur.
At contra nobis cœnum teterrima quom sit
Spurcities, eadem suibus hæc munda videtur,
Insatiabiliter totei ut volvantur ibeidem.
Hocc' etiam super est, ipsâ quam dicere de re
Adgredior, quod dicundum prius esse videtur.
Multa foramina quom variis sint reddita rebus,
Dissimili inter se naturâ prædita debent
Esse, et habere suam naturam quæque, viasque.
Quippe et enim variei sensus animantibus insunt,
Quorum quisque suam proprie rem percipit in se.
Nam penetrare alio sonitus, alioque saporem
Cernimus e sucis, alio nidoris odores.
Præterea, manare aliud per saxa videtur,

And with its effluence melts th' adhesive wax.
Fire fuses gold and copper, but contracts
The flesh of beeves and shrivels their tough hides.
Red from the flame, steel hardens in the pool,
But hides and flesh relax. The bearded goat
On the wild olive most luxurious feasts,
Deems it all nectar, all ambrosia deems,
While nought so hateful to the mouth of man.
Swine fly perfumes, sweet marjoram is death,
Scents that, with us, the spirit oft revive.
While the gross slough, mere filth among ourselves,
To them proves cleanliness; and deep within
Plunge they, all joyous mid its miry waves.

This, too, the muse should notice ere we yet
Full on the magnet enter; that, as things
Oft various classes hold of pores within,
Each class from each must differ, and a breadth,
A shape possess, appropriate to itself.
For many a sense each vital tribe endows,
Various, empower'd as various parts t' achieve
And mark its proper objects as they rise.
Thus sounds by one assail us, this conveys
Taste from each juice, and streams of odour that.
So the firm stone some substances transpiere

Atque aliud lignis : aliud transire per aurum ;
Argentoque foras aliud, vitroque, meare ;
(Nam fluere hac species, illac calor ire, videtur)
Atque aliis aliud citius transmittere eâdem.
Scilicet id fieri cogit natura viarum,
Multimodis varians, ut paullo obstendimus ante,
Propter dissimilem naturam, textaque, rerum.

Quapropter, bene ubi hæc, confirmata atque locata,
Omnia constiterint, nobis præposta, parata ;
Quod super est, facile hinc ratio reddetur, et omnis
Caussa patefiet, quæ ferri perliceat vim.

Principio, fluere e lapide hoc permulta necesse est
Semina, sive æstum, qui discutit aëra plagis,
Inter qui lapidem ferrumque est quomque locatus.
Hoc ubi inanitur spatium, multusque vacefit
In medio locus ; ex templo primordia ferri
In vanum prolabsa cadunt conjuncta, fit utque
Annulus ipse sequatur, eatque ita corpore toto.
Nec res ulla magis, primoribus ex elementis
Indupedita suis, arte connexa cohæret,

Ver. 1024. ——*some gold, some silver,*——] I have often had occasion to notice, as I have proceeded, the astonishing progress of the Greeks and Romans in the science which, in modern times, is denominated chemistry ; and which, as a science, is supposed to be of very late origin. It is impossible to say that Lucretius here immediately refers to those powerful menstrua which, among ourselves, are entitled aqua regia, and aqua fortis, but it must, at least, be granted, that he refers to menstrua of a similar description ; menstrua, whose action was limited to a power of dissolving the one or the other of these metals alone.

Some wood, some gold, some silver, crystal some,
Heat those pervading, the light image this.
And thus through all things different objects rush
With ease far different; nature to their forms,
Their powers diverse, as long anterior prov'd,
Th' appropriate duct adapting most exact.

These axioms thus premis'd, then, and maintain'd,
All else flows obvious, and the total cause
Unfolds spontaneous that the steel compels.

First, from the magnet countless atoms stream
In tide perpetual, chacing the mid air
'Twixt the stern iron plac'd, and stone itself.
This space once emptied, and a total void
Form'd broad between, abrupt the seeds of steel,
Thrown forth alike, usurp it, close conjoin'd,
Dragging the ring resistless as they rush.
For nought exists with primal seeds more harl'd,
More clinch'd, more tangled in commutual bonds

Ver. 1042. ——*the cold steel, all horror to the touch.*] The original is highly forcible, and felicitous:

——validi ferri naturæ frigidus horror.
Ver. 1039.

And it is well preserved by Marchetti:

——fredd' orror del duro ferro.

Thus Virgil also, copying, doubtless, from the present phraseology:

Tum ferri rigor——
GEORG. i. 14.

The steel's chill shudder——.

And thus Polignac, from Virgil:

Ferri nempe rigor si producatur.
ANTI-LUCR. v. 364.

If here the steel's chill *shudder* be produc'd.

Quam validi ferri naturæ frigidus horror:
Quo minus est mirum, quod dicitur; ex elementis
Corpora si nequeunt, de ferro plura coorta,
In vacuum ferri, quin annulus ipse sequatur:
Quod facit; et sequitur, donec pervenit ad ipsum
Jam lapidem, cæcisque in eo conpagibus hæsit.
Hoc fit idem cunctas in parteis; unde vacefit
Quomque locus, sive ex transvorso, sive superne,
Corpora continuo in vacuum vicina feruntur:
Quippe agitantur enim plagis aliunde, nec ipsa
Sponte suâ sursum possunt consurgere in auras.

Huc adcedit item, quâ re queat id magis esse:
Quod simul a fronte est annelli rarior aër
Factus, inanitusque locus magis, ac vacuatus;
Continuo fit, utei, qui post est quomque locatus
Aër, a tergo quasi provehat, atque propellat.
Semper enim circum positus res verberat aër;
Sed tali fit utei propellat tempore ferrum,
Parte quod ex unâ spatium vacat, et capit in se.
Hic tibi, quem memoro, per crebra foramina ferri
Parvas ad parteis subtiliter insinuatus,

Ver. 1052. ——*prest from strife within,*] Guernier, in this place, gives us the true interpretation; De Coutures is altogether unintelligible, and Creech and Marchetti have erroneously adopted the idea of "strife *without*."

Thus, the former:

Not that the heavy steel by nature flies,
But *blows without* will force, and make it rise.

And thus, in the Italian version:

Than the cold steel, all horror to the touch.
Whence wond'rous less the doctrine thus announc'd
That from the steel those atoms ne'er can part,
Urg'd through the vacuum, but the ring succeeds:
Abrupt succeeds it, gains the stone abrupt,
And fixt and firm in mystic league coheres.
So flies it, too, tow'rds every point alike,
Borne upwards, or transverse, where'er the void
Spreads round the magnet, following, in its course,
The seeds that nearest touch the vacant sphere,
Themselves hence foremost prest from strife within,
And powerless, else, through ether e'er t' ascend.
Hence, too, the ring draws pinions in its flight:
That as, at once, secedes th' anterior air,
And forms the void, th' elastic tide behind
Drives it, perpetual plying at its back.
For air encircles all things; but alone
Can act coercive, and the steel protrude
When first the momentary void exists,
Opes its pure passage, and admits it free.
Then potent acts it; through the total ring,
Through every pore, its puny atoms darts,

——poschè agitati *esternamente*
Son da colpi continui.

Ver. 1058. *For air encircles all things;—*] Thus, Sophocles:

Ω φαος αγνον, και γη,
Ισομοιρος αηρ. Electr. 86.

O light benign! and air the solid earth
That clasps, impartial.

Trudit, et inpellit: quasi naves velaque ventis,
Hæc quoque res adjumento, motuque, juvatur.
Denique, res omnes debent in corpore habere
Aëra, quandoquidem raro sunt corpore, et aër
Omnibus est rebus circumdatus adpositusque.
Hicc' igitur, penitus qui in ferro est abditus, aër
Solicito motu semper jactatur, eoque
Verberat annellum, dubio procul; et ciet intus
Scilicet: atque eodem fertur, quo præcipitavit
Jam semel, et vacuam partem in conamina sumpsit.
Fit quoque, ut a lapide hoc ferri natura recedat
Interdum: fugere, atque sequi, consueta vicissim.
Exsultare etiam Samothracia ferrea vidi;
Ac ramenta simul ferri furere intus ahenis
In scaphiis, lapis hic Magnes quom subditus esset:
Usque adeo fugere a saxo gestire videtur
Ære interposito; discordia tanta creatur:
Propterea, quia nimirum prius æstus ubi æris

Ver. 1072. *Arm'd with new speed,——*] The verse answering to this, and numbered above 1032, consistently with its position in the majority of the MSS. is to be met with in the common editions at ver. 1021, anticipating its proper place by nine lines.

Ver. 1074. *Repell'd by turns, and re-attracted close.*] From this, and the verse immediately foregoing, Gassendi concludes that our poet was scientifically acquainted with the difference of the two poles of the magnet, and alludes to them in this place. This, I am afraid, is stretching conjecture rather too far: but that some indistinct apprehension of such a fact was not uncommon, we may, I think, fairly conclude, from the following expression of Isidorus, Orig. xvi. 4. "Est quippe et *alius* in Æthiopia magnes, qui ferrum non *ambiit* sed *respuit*." See the Note on ver. 934. of this Book.

Chacing the steel as winds the bark impel.

Then air, moreo'er, whate'er exists, within
Holds, doubtless; since of tenuous frame compos'd,
And by surrounding air for ever lash'd.
Whence air through iron roves, too, deep-conceal'd,
Ceaseless in action, and the docile ring
Plies with internal tempest, doubly hence
Borne tow'rds the void where centres all its aim;
Arm'd with new speed, new succour for the flight.
Oft from the magnet, too, the steel recedes,
Repell'd by turns, and re-attracted close.
And oft in brazen vessels may we mark
Ringlets of Samothrace, or fragments fine
Struck from the valid iron, bounding high
When close below the magnet points its powers.
So vast th' aversion, e'en the brass beneath,
Feel they at times; the discord such induc'd.
Thou thus resolve the problem: that the brass

Ver. 1076. *Ringlets of* Samothrace,——] Samothrace was an island in the Ægean sea. The ringlets, or little rings, here alluded to, were probably first of all invented among its inhabitants. In their early and ruder state they were made of iron alone; and were rather hollow balls than rings, made to open for the purpose of receiving particular amulets. In later periods of Rome, they became extremely common, were uniformly worn by servants, and encased with gold all over, excepting at the head, which still retained its iron appearance. By other writers, however, these ringlets are said to have been denominated Samothracian, from this very property of secrecy, or concealing the inclosed charm: the term Samothracian being, by such interpreters, derived from the Hebrew סתר, "to conceal," or "secrete."

Præcepit, ferrique vias possedit apertas;
Posterior lapidis venit æstus, et omnia plena
Invenit in ferro; neque habet quâ tranet, ut ante:
Cogitur obfensare igitur, pulsareque fluctu
Ferrea texta suo: quo pacto respuit ab se,
Atque per æs agitat, sine eo quod sæpe resorbet.

Illud in hiis rebus mirari mitte, quod æstus
Non valet e lapide hoc alias inpellere item res.
Pondere enim fretæ partim stant; quod genus, aurum:
Ac partim, raro quia sunt cum corpore, ut æstus
Pervolet intactus, nequeunt inpellier usquam:
Lignea materies in quo genere esse videtur.
Inter utrasque igitur ferri natura locata,
Æris ubi adcepit quædam corpuscula, tum fit,
Inpellant ut eam Magnesia flumina saxi.
Nec tamen hæc ita sunt aliarum rerum aliena,
Ut mihi multa parum genere ex hoc subpeditentur,
Quæ memorare queam inter se singulariter apta.
Saxa vides primum solâ coolescere calce:

Ver. 1096. ——*the full flood*] In the original: ——Magnesia flumina saxi. Ver. 1062. a reading proposed by Bentley, and copied into Wakefield's version: and which precisely corresponds with ver. 1084, and 1089 above. In the common editions, we meet with the more prosaic phrase: ——Magnesia *semina* saxi.

Ver. 1101. *Lime only stones connects;*——] In the Note on ver. 934, I have observed that solutions of iron constitute a very powerful cement of gravel, stones, and similar substances, and, consequently, become a very active and extensive cause of lapidification, or the formation of stone-quarries, breccias, indurated grifites, and beds of a like description: but calcareous

First throws, as nearest, its attenuate breath,
And fills the pores of iron; which when, next,
The stream magnetic reaches, it in vain
Toils to transpierce, each avenue possest.
Check'd in its course, with wave perpetual, hence,
The rings, the raspings beats it, and above
Far off repulses, else embracing strong.
Nor strange conceive it the magnetic stream
Nought drives besides: for powers there are resist,
Like the firm gold, confiding in their weight;
While some a frame so loose present and rare
The rushing vapour permeates, void of touch.
Such frame all timbers offer. But the steel
Springs 'twixt the two: and hence, when through its pores
Clogg'd with the brass effluvium, the full flood
Flung from the magnet dashes it sublime.
Nor are such unions through created things
Discern'd unfrequent, nor severe the task
To point affinities of equal strength.
Lime only stones connects; the strong, steer-glue

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matter, lime, or *calx*, as our poet denominates it in the verse before us, is a cause of lapidification, or the junction and increase of stones of every kind, so much more common, and at the same time so much more powerful and rapid, that in comparison even with solutions of iron itself, and most unquestionably in comparison with every thing else, he may well say that lime, calx, or calcareous matter, is the only cement or connecting medium of stones, the chief, or sole cause of lapidification. Scarcely any other cement is ever employed in masonry—but it is employed on a much broader scale by nature herself. The vast quantities of lime-stone or calcareous earth diffused through the ocean is obvious from the immense shoals of shell-fishes which are perpetually forming in its bosom, and the ease with which they recover their defensive incrustations when deprived of them by accident, or annual exfoliation; if in

Glutine materies taurino jungitur unâ,
Ut vitio venæ tabularum sæpius hiscant,
Quam laxare queant conpages taurea vincla.
Vitigenei latices in aquaï funtibus audent
Misceri, quom pix nequeat gravis, et leve olivum.
Purpureusque colos conchylii jungitur uno
Corpore cum lanæ, dirimi qui non queat usquam;

reality this earth be not secreted from their own bodies by express organs for the occasion. And hence the equal facility with which quarries of grits, griffites, breccias, and other earths, are formed in places where the sea-water has a free access to such substances. We learn from Saussure, that in the neighbourhood of Messina, where grits are quarried near the sea, the excavations produced by their removal are soon filled with sea-sand, the particles of which are in a few years agglutinated into the most rigid state of solidification by the calcareous matter introduced with the sea-water which flows over them. Vol. I. Sect. 305. A similar remark is made by Mr. Bowles, in his account of Spain, p. 99, who observes, that in the vicinity of Cadiz fragments of brick, mortar, &c. thrown on the shore, are soon cemented together with the sand and shells into one uniform mass of solid stone. A parallel effect is noticed by Flurl, who tells us that fragments of rocks are strongly cemented together at Hugelfing in Bavaria, and that in a short time, by the influx upon them of streams impregnated with calcareous matter. Bavaria, 23, 24. I have already remarked, however, that the process of cementation or solidification is considerably quickened, and the union rendered considerably more firm and durable, by a certain mixture of *iron* pyrite with the *lime* or calcareous matter employed; and I understand that such cementations are now in use among several builders in this metropolis.—The lapidification produced by *substitution* or *petrifaction*, as it is more commonly called, is of a different description, and falls not within the scope of the present Note. This also is an extensive cause of the formation of stones, but by no means equal to that of cementation.

Ver. 1101. ——*the strong, steer-glue*] Glue, among the ancients, as among ourselves, was prepared from the sinewy membranes of almost every quadruped; but that obtained from bulls and bullocks was most esteemed for its tenacity—the phrase in the original, ver. 1067, is *glutine taurino*. And in Pliny, Nat. Hist. xxviii. 17, we meet with the following account: "Glutinum præstantissimum fit ex auribus taurorum et genitalibus." There is an admirable paper by Mr. Hatchett upon the subject of animal gluten or gelatin, to be found in the Philosophical Transactions for the year 1800, entitled "Chemical Experiments on Zoöphytes; with some Observations on the component parts of Membrane." "Membranes," Mr. Hatchett observes, "are for the most part composed of gelatin in its different states, from that of soluble mucilage to strong glue. The gelatin from the hide of the rhinoceros is peculiarly viscid: that from eel-skin is more readily obtained, and in larger proportion, but its viscidity is not equal to the former. The cutis of the human body is little more than gelatin—the cuticle contains it, but more slightly. It is traced in hair, and is the basis of its flexibility: for the harder and less flexible hair yields it in a smaller proportion, while the softer, when exposed to boiling water, loses both flexibility and strength. The tougher the membrane, in general the more viscid the gelatin; and hence the strength of the glue described by our poet in the verse before us. The horns of animals contain also

Joins planks so firm, a bond so valid rears
The closest-textur'd table through its veins
Will easier sever than the glue desist.
The vine's pure juice in close alliance dares
League with the fountain; while the pond'rous pitch,
The light-wing'd oil refuses. With the fleece
The purple murex so minutely blends

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a large portion of this substance, and when deprived of it they lose their flexibility, and become rigid. Feathers and quills possess little or no gelatin: they are probably elongations and modifications of the cuticle alone. The horny crusts of insects, the scales of the scorpion, tortoise-shell, human nail, and the paring of the ox's hoof, are of the same kind: alumine of eggs, when coagulated and dried, resembles tortoise-shell, or human nail. With respect to the muscular fibre, Mr. Hatchett concludes, from his experiments on this subject, that it "contains lime in various proportions, and in two different states, viz. carbonat and phosphat; and that the greater part of the latter is gradually separated in conjunction with the gelatin, by means of boiling water." "I would not have it understood, however," continues he, "that phosphat of lime is an essential ingredient in gelatinous substances; for, on the contrary, isinglass, which is a perfectly gelatinous body, affords but a mere visible trace of it. The muscular fibre contains therefore, occasionally, the basis of both bone and shell. The distinguishing chemical character of the latter being carbonat of lime, and that of the former, as well as of the enamel of the teeth, being phosphat of lime: in the formation of bone, however, a certain proportion of carbonat is a constituent part, or at least generally enters into its composition." See Note on Book III. ver. 626. Gelatin, albumen, and muscular fibre, the component parts of membrane, differ also in their proportion of carbone in the order here enumerated, the muscular fibre containing the most. With respect to gelatin, Mr. Hatchett has thrown out an ingenious hint, that as the putrescibility as well as the flexibility and elasticity of bodies depends upon the proportion they possess of this substance, and as antiseptics generally contain the tanning principle, which is well known to produce its peculiar effects by precipitating the gelatin, the tonic effects of the Peruvian bark may depend on its *tannin*, which is again a very different principle from that of its astringency. The willow-bark, which also contains the tannin, and is not peculiarly astringent, is a tonic; and the cinchona floribunda, which does not contain the tannin, is reported to be inert as to medical qualities.

Ver. 1108. *The purple murex*——] The splendid and durable dye obtained from this valuable shell-fish of the Old World, is known by history to every one. A full account of it, however, to those who are desirous of more explicit information, may be obtained by consulting Pliny, ix. 38. who intimates that, either from a variety in the fish employed, or in the mode of manufacturing the colour, it occasionally exhibited a considerable difference of tincture, and hence was denominated rose-purple, violet-purple, hyacinth-purple. The first appears to have been held in the highest estimation, the rose, however, being rather darker in its hue than we commonly meet with it; in which case the murex was *nigrantis rosæ sublucentem*.

The mode of preparing this costly and magnificent dye is lost to the moderns altogether. It was originally discovered in Tyre, and is hence frequently de-

Non, si Neptuni fluctu renovare operam des;
Non, Mare si totum velit eluere omnibus undis. 1075

Denique, et auro res aurum concopulat una,
Atque æs plumbo fit utei jungatur ab albo.

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nominated Tyrian dye. Accident, which has so often befriended human ingenuity, gave the first idea of converting it to any utility. The anecdote, as commonly accredited, is thus told us in verse, by our own countryman, Dyer:

Tyrian Melcartus, thus (the first who brought
Tyre's useful ore from Albion's distant isle,
And, for unwearied toils and arts, the name
Of Hercules acquir'd)—when o'er the mouth
Of his attendant sheep-dog he beheld
The wounded murex strike a purple stain,
The purple stain on fleecy woofs he spread,
Which lur'd the eye, adorning many a nymph,
And drew the pomp of trade to rising Tyre.
Fleece, ii.

This is the common story: but in the fragment of Palæphatus the Egyptian, De Inventione Purpuræ, this Hercules is represented as a philosopher, contemporary with Phœnix king of Tyre, to whom, instead of employing it publicly as an ornament for the fair, he communicated the discovery confidentially, and who restrained the use of it to his own person—adopted it, from its unrivalled beauty, as an exclusive badge of his own sovereign power, and prohibited his subjects from habits of the same dye. Ἡ δὲ τοῦ χρώτος τῆς βασιλείας τοῦ Φοινικος ἦν ΗΡΑΚΛΗΣ ὁ ΦΙΛΟΣΟΦΟΣ Τυριος, ἐστις εὗρε την Κοχυλην, &c. The Greek term κοχυλη was probably applied to the murex, in consequence of its turbinated form ending in a sharp apex, and is probably of Chaldæan origin; cog implying power, pre-eminence, royalty; and cal, col, or chol, an eminence, ending like a cone, in an apex, whence cog-chol is literally the *royal one*. And whence also, in consequence of a similar derivation, Mr. Allwood supposes this fish and dye must have been known far prior to the establishment of Tyre, and identifies the Hercules here referred to with the deity of this name, who was one of the most ancient of Egypt, and whose worship was conveyed to Tyre by a colony of Cuthites wandering into that region. Literary Antiquities of Greece, Sect. iii.

Ver. 1110. *Day after day with all great* Neptune's *waves:*
No—his whole sea the stain would ne'er wash out.] I have often had occasion to point out a variety of resemblances between Lucretius and Shakspeare. Whether these have, or have not been the effect of mere accident, I will not pretend to decide: if they have, they involve a supposition far more extraordinary than that of previous knowledge and express imitation. The above is so pointedly similar to the following well-known passage in the celebrated speech of Macbeth, after the murder of Duncan, that the resemblance cannot possibly be overlooked by any one:

Will all great Neptune's ocean wash this blood
Clean from my hand?—No—this my hand will rather
The multitudinous sea incarnadine.

I have not, in my own version, given an intentional inclination towards this passage: the original requires no such aid to maintain its parallelism. It occurs as follows, ver. 1074:

Non, si Neptuni fluctu renovare operam des;
Non, Mare si totum velit eluere omnibus undis.

But whether this be imitation on the part of Shakspeare, or not, there can be little doubt that the following is so on the part of Seneca:

Quis Tanäis, aut quis Nilus, aut quis, Persicâ
Violentus undâ, Tigris, aut Rhenus ferox,

Nought e'er can part them: no—though e'en thou toil
Day after day with all great Neptune's waves:
No—his whole sea the stain would ne'er wash out.
One cement sole with gold concentrates gold,
And nought but pewter brass with brass unites.

Tagusve, Iberâ turbidum gazâ fluens,
Abluere dextram poterit? Arctoam licet
Mæotis in me gelida transfundat mare,
Et tota Tethys per meas currat manus,
Hærebit altum facinus. Herc. Fur. 1323.

Can Nile, or Tanais, or the Persic gulph
Boist'rous of wave, or Tigris, or the Rhine,
Or turbid Tagus through Iberia roll'd,
Wash this right-hand?—No:—from the frozen North,
Should flow the Euxine, should all Neptune's waves
Pour o'er my hands, this crime would taint me still.

Ver. 1112. *One cement sole with gold concentrates gold,*] I take the amended Lection of Mr. Wakefield, ver. 1076:

——auro res aurum concopulat una.

The common reading is, unquestionably, incorrect, and inconsistent, indeed, with the best copies:

——res auro *argentum* concopulat una,

instead of which, and certainly with some improvement, Faber suggests:

——res auro *non* aurum *copulat* una.

The cement here referred to is, doubtless, the chrysocolla, a mineral sand, found on the shores of the Red Sea, of an elegant green colour, denominated by the natives of modern times tincar, or tincal. The borax, now in use for similar purposes, does not differ essentially from the chrysocolla, when dissolved and crystallised, and is, by some chemists, supposed to be precisely the same.

Ver. 1113. *And nought but pewter brass with brass unites.*] In the original, ver. 1077:

Ærique æs plumbo fit uti jungatur ab albo.

Pewter is, in the present day, the common solder for copper and brass: it is generally a combination of tin, lead, and regulus of antimony. From the lead employed in the manufacture, and the splendid whiteness of its appearance when too much lowered or adulterated, it is here happily denominated by our poet *plumbum album*; literally "*white lead*:" and by this term it is erroneously translated by Guernier. I say, erroneously; for the cerusse, or *white lead* of modern days, is no solder whatever in metallic preparations. Creech omits the verse entirely, and thus dexterously runs away from the difficulty. De Coutures is wrong in the whole passage: "l'argent," says he, "est allié avec l'or, et l'airain avec le plomb." "Silver unites itself with gold, and brass with lead." Marchetti is quite correct:

——con lo stagno il rame
Si salda al rame

I must leave it to the chemists to determine what substance was employed formerly, instead of the regulus of antimony; or whether the ancients were acquainted with a metal of this description, and its different powers in different states of combination. Yet, probably, the plumbum album, or copper solder of the Romans, was a mixture of lead and tin alone.

Since writing the above, I have met with an excellent memoir of M. Klaproth, inserted in the Berlin Memoires de l'Academie Royale des Sciences, Vol. for 1792—1795: in which the author asserts, that the plumbum nigrum of the Romans was lead, and the plumbum album, candidum, or argentarium, tin, or the κασσιτερος of the Greeks. There can be no doubt that this appellation was generally applied to tin alone: but as this metal, when employed simply, will be found a very indifferent solder for copper,

Cætera jam quam multa licet reperire? Quid ergo?
Nec tibi tam longis opus est ambagibus usquam,
Nec me tam multam heic operam consumere par est;
Sed breviter paucis præstat conprendere multa.
Quorum ita texturæ ceciderunt mutua contra,
Ut cava conveniant plenis hæc illius, illa
Hujusque; inter se junctura hæc optuma constat.
Est etiam, quasi ut annellis hamisque plicata,
Inter se quædam possint cop'lata teneri:
Quod magis in lapide hoc fieri, ferroque, videtur.
Nunc, ratio quæ sit morbis, aut, unde repente
Mortiferam possit cladem conflare coorta
Morbida vis hominum generi, pecudumque catervis,
Expediam. Primum, multarum semina rerum
Esse supra docui, quæ sint vitalia nobis;
Et contra, quæ sint morbo, mortique, necesse est
Multa volare; ea quom casu sunt forte coorta,
Et perturbarunt cœlum, fit morbidus aër.
Atque ea vis omnis morborum, pestilitasque,

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it is obvious, that the plumbum album of our poet, and of the Roman coppersmiths in general, must also have included a compound of tin with lead, or some other metal, as well as pure unmixed tin. M. Klaproth, who has paid much attention to numismatic analysis, has discovered that the coins of Magna Græcia and Sicily consisted of copper, alloyed with from an eighth to a twelfth part of lead, and half as much of tin. The Roman coins he has at times found to have been formed of pure copper: and occasionally with an alloy of one-fourth, or one-sixth part of zinc, and a small proportion of tin. The ancients were only acquainted with zinc in its ore, which is calamine: their brass was denominated aurichalcum, and was a compound of calamine and copper. Zinc, as a semi-metal, was not known till

Such facts how num'rous! but why more recite?
To thee 'twere labour useless, and perplext;
And to the muse unjust; for much remains
Much, though but few the numbers we design.
Where things once fit with textures rear'd reverse,
Rare and o'ercharg'd, and this to that, and that
Responds to this, alternate, they combine
With firmest junction: but combine they, too,
Oft as though hooks and ringlets form'd the bond:
And thus, perchance, the magnet meets the steel.

Now whence diseases rise, the morbid power
What, that, once gender'd, spreads its baneful blast
O'er man's pale offspring, and the brutal throngs,
Next will we sing. Already hast thou heard
That seeds exist, from many a substance flung,
To life salubrious, yet, too oft, revers'd,
Noxious, and big with death. When spring the last
Through heaven full flocking, all the vital air
Sickens immediate, through its texture chang'd.
And thus full flock they, their pestiferous power

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its discovery by Albertus Magnus, in the 13th century. According to Aristotle, the Greeks acquired their knowledge of converting copper into brass, or aurichalcum, from a people who inhabited the borders of the Euxine sea, whom he denominates Mossynæci: and it is from this word M. Klaproth derives the term *messing*, which is the German appellation for brass.

Ver. 1124. *Now whence diseases rise, the morbid power*
What, that, once gender'd,——] Our excursive philosopher now hardily enters into the department of medicine. He points out the general causes of diseases, but confines himself principally to those which are endemic or pestilential, and concludes with a most afflictive narration of the celebrated plague at Athens.

Aut intrinsecus, ut nubes nebulæque, superne
Per cœlum veniunt; aut ipsâ sæpe coorta
De terrâ surgunt, ubi putorem humida nacta est,
Intempestivis pluviisque, et solibus, icta.

Nonne vides etiam cœli novitate, et aquarum,
Tentari, procul a patriâ queiquomque, domoque,
Adveniunt? ideo quia longe discrepitant res.
Nam quid Britannis cœlum differre putamus,
Et quod in Ægypto est, quâ mundi claudicat axis?
Quidve quod in Ponto est, differre, et Gadibus, atque
Usque ad nigra virûm percocto secla calore?
Quæ quom quatuor, inter se divorsa, videmus
Quatuor a ventis, et cœli partibus, esse;
Tum color et facies hominum distare videntur
Largiter, et morbei generatim secla tenere.

Est elephas morbus, qui propter flumina Nili
Gignitur Ægypto in mediâ, neque præterea usquam.

Ver. 1134. ——*from intrinsic birth*
In heaven itself begot——] Thus, correctly, in Mr. Wakefield's edition, ver. 1097:

Aut *intrinsecus*, ut nubes, nebulæque——

In all the common impressions, *intrinsecus* is exchanged with an extraordinary depravation of the sense, to *extrinsecus*.

Ver. 1140. ——*tried severe*
With the new stream they drink, the heaven inhale?] Aristotle had, long before our poet's æra, insisted largely on these topics, in his valuable treatise "De Aëre, Aquis et Locis:" and hence the justice of the complaint uttered by Ovid, in his exile:

Nec cœlum ferimus, nec aquis assuescimus istis.

Fanning around them, from intrinsic birth
In heaven itself begot as mists or clouds;
Or breath'd from earth, when once her sodden'd soil
Ferments corrupted, plied by ceaseless rains
Untimely pour'd, and hot succeeding suns.
See'st thou not, oft, the restless crowds that rove
Far from their homes, their countries, tried severe
With the new stream they drink, the heaven inhale?
From the dread change such sickness sole results.
How wide must Britain differ in her clime
From Egypt's tribes, o'er whom the northern pole
Gleams never! orient Pontus, how, from those
Far westward, scatter'd o'er the Gadian isles,
Or the swart Ethiop, black'ning in his blaze!
And since the world's vast quarters, each from each,
As various heavens and atmospheres divide,
So man himself in tincture, face, and form
Alike must vary, and disease sustain'd.
High up the Nile, mid Egypt's central plains,
Springs the dread leprosy, and there alone.

This clime I cannot suffer, nor endure
These wontless streams.

Ver. 1148. ——*the world's vast quarters,*—] Hence, Virgil:

——et *quatuor* addunt
Quatuor a ventis obliqua luce fenestras.
Georg. iv. 297.

And towards each *quarter* whence the gale may strike
A casement add, illum'd with light oblique.

Ver. 1152. ——*mid* Egypt's *central plains,*] *Springs the dread leprosy, and there alone.*] It seems to be uniformly acceded to by Pliny, Aretæus, Galen, and Celsus, that the elephas, elephantia-

Atthide tentantur gressus, oculeique in Achæis
Finibus: inde aliis alius locus est inimicus
Partibus, ac membris; varius concinnat id aër.

Proinde, ubi se cœlum, quod nobis forte venenum,
Conmovet, atque aër inimicus serpere cœpit;
Ut nebula ac nubes, paullatim repit, et omne,
Quâ graditur, conturbat, et inmutare coactat.
Fit quoque, ut in nostrum quom venit denique cœlum,
Conrumpat, reddatque sui simile, atque alienum.
Hæc igitur subito clades nova, pestilitasque,
Aut in aquas cadit, aut fruges persidit in ipsas,
Aut alios hominum pastus, pecudumque cibatus;

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des, or leprosy, had its origin in the region here referred to. Galen, indeed, appears to confine it altogether to this country, ad Glauc. lib. xiii. Celsus declares, that it was scarcely known in Italy in his æra, lib. iii. 24. and Pliny informs us of the truly sanguinary remedy adopted by the Egyptian monarchs, when, unluckily for their subjects, they laboured beneath this malady. Nat. Hist. xix. 16. "Ægypti, peculiare hoc malum, et cum in reges incidisset populis funebre; quippe in balneis solia temperabantur humano sanguine ad medicinam eam." "This disorder is peculiar to Egypt, and when it affects its sovereigns, a dreadful disorder proves it to the people: for the couches in the royal baths are on such occasions warmed with human blood by way of medicine."

Ver. 1159. ——*its hostile effluence creeps*
Slow, like a mist or vapour;——] An admirable simile, and happily imitated by Klopstock in the following verses:

Also naht die pest in mitternächtlicher stunde
Schlummernden städten. Es liegt auf ihren verbreiteten flügeln
An dem mauren der tod, und haucht verderbende dunste. Mess. Ges. iii.

So towards the wearied city, as it sleeps,
In dead of night *the pest malignant creeps;*
Death marks the *vapour* with triumphant wings,
And o'er its walls the floating mischief flings.

In Virgil's description of the pest that affected brutes alone, it is impossible not to perceive that he has borrowed much from our own poet: yet is there something wonderfully sublime and energetic in representing the fiend Tisiphone as rising from hell, and driving before her a train of diseases and fears; and, as Dr. Warton observes, it cannot but remind us of that exalted image in Habakkuk, iii. 5. where the prophet, speaking of the Almighty, says,—"before him went the Pestilence."

The personification of Death, in the act of executing the divine commands, is exhibited, with great

Gout clogs the feet in Attica; the sight
Fails in Achaia: different regions, thus,
With different organs wage eternal war,
As urg'd by atmospheres of frame unlike.
But when the heaven, of poisonous power to us,
First moves remote, its hostile effluence creeps
Slow, like a mist or vapour; all around
Transforming as it passes till, at length,
Reach'd our own region, it the total scene
Taints, and assimilates, and loads with death.
Abrupt then falls the new, pistif'rous bane,
Broad o'er the fountains, or the food invades
Of man, or beast, the pasture or the grain.

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difference, both as to features, and character, amongst different nations. Perhaps the most mean and insignificant delineation is the common monkish one of a skeleton with a dart in one hand, and an hour-glass in the other, ghastly striding towards the victim of his attack: while one of the most terrible, and best defined, is that of the Scandinavian poets, who represent him as mounted on horse-back, fleeing, in the dead of night, with inconceivable rapidity, over hedges and ditches, vallies, mountains, and rivers, in pursuit of his prey, meagre in flesh, wan in colour, and horrible in aspect, the horse possessing the same character as the rider. Many of the German ballads, and especially those of Bürger, have, of late, made a very free use of this personification; and it has been contended, that the picture is altogether of Scandinavian origin, and peculiar to the bards of that country: yet what will such antiquarians say to the following parallel passage in the Apocalypse, ch. vi. 8. which, while it evinces every characteristic feature of the foregoing imagery, adds a variety of collateral circumstances of the utmost sublimity and terror, unknown to Runic poetry, and infinitely superior to its proudest and most energetic specimens: Και ειδον, και ιδου ιππος χλωρος, και ο καθημενος επανω αυτου ονομα αυτω ὁ ΘΑΝΑΤΟΣ, και ὁ ΑΔΗΣ ακολουθει μετ' αυτου· και εδοθη αυτοις εξουσια αποκτειναι επι το τεταρτον της γης, εν ρομφαια, και εν λιμω, και εν θανατω, και υπο των θηριων της γης. "And I looked, and behold! a ghastly *horse*, and the name of his rider was Death; and Hell followed him. And they were empowered to exterminate a fourth part of the earth with sword, and with famine, and with pestilence, and with the wild-beasts of the earth." The word here translated *ghastly*, χλωρος, is peculiarly expressive in the original. It is more generally rendered *pale*, but this is still less adequate to its real spirit; it means that *green-sick*, wan, and exanimate hue which is pathognomically descriptive of the disease termed chlorosis.

Ver. 1164. *Abrupt then falls the new, pestif'rous bane,*
Broad o'er the fountains, or the food invades
Of man, or beast,——] Thus imitated by Virgil:

Aut etiam subspensa manet vis aëre in ipso:
Et, quom spirantes mixtas hinc ducimus auras,
Illa quoque in corpus pariter sorbere necesse est.
Consimili ratione venit bubus quoque sæpe
Pestilitas; etiam pigris balantibus ægros.
Nec refert, utrum nos in loca deveniamus
Nobis advorsa, et cœli mutemus amictum;
An cœlum nobis ultro natura coruptum
Deferat, aut aliquid, quod non consuevimus uti;
Quod nos adventu possit tentare recenti.

Corrupitque lacus, infecit pabula tabo.
GEORG. iii. 481.

Defil'd the freshness of the crystal flood,
And scorch'd with baleful breath the grassy food.
WARTON.

Ver. 1168. ——*whence, with every breath,*
Drink we alike the poison through our veins.]

To the same effect Cowper:

The very elements, though each be meant
The minister of man, to serve his wants,
Conspire against him. *With his breath he draws*
A plague into his blood. TASK, ii.

Ver. 1173. *We change the covering of the skies,*—]
A daring, dithyrambic expression, which has seldom been equalled, or copied by succeeding poets; but of which the sacred writings furnish us with many examples. Thus, Ps. cii. 25, 26:

לפנים הארץ יסדת
ומעשה ידיך שמים:
המה יאבדו ואתה
תעמד וכלם כבגד
יבלו כלבוש תחליפם ויחלפו:

Of old didst thou lay the foundations of the earth,
And the heavens are the work of thy hands:
These shall equally perish, but thou shalt endure;
Even *as a garment shall they be worn out,*
And when thou chusest to change them they shall be changed.

Whence, in all probability, Isaiah, xl. 21—23:

הלוא תדעו הלוא תשמעו
הלוא הגד מראש לכם
הלוא הבינותם ממוסדות הארץ:
הישב על חוג הארץ
וישביה כחגבים
הנוטה כדק שמים
וימתחם כאהל לשבת:
הנתן רוזנים לאין שבטי
ארץ כתהו עשה:

Have ye not known? have ye not heard?
Hath it not been published to you from the beginning?
Have ye not understood from the foundations of the earth?
He who sitteth upon the circle of the earth,
And to whom its inhabitants are as grasshoppers;
Who unfoldeth the heavens as a curtain,
And spreadeth them out as a tent to dwell in;
Who reduceth magistrates, *yea* monarchs to nothing—
Can dissolve the earth itself into emptiness?

The arrangement here presented, of this sublime

Or, haply, still along the breezy air
It floats commingled; whence, with every breath,
Drink we alike the poison through our veins.
And hence the murrain that assaults, at times,
The lusty herd, the blight that thins our flocks.
Nor aught imports it whether, urg'd by gain,
We change the covering of the skies, and seek
Ourselves the noxious climate, or its breeze
Meet us spontaneous; or aught else assail
Of nature new, and strange to every sense.

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passage of the original, is different from that afforded by any modern version with which I am acquainted, yet I have no doubt that it is what was intended by the prophet himself. It gives a sense far more magnificent than that in common acceptation: is more consonant with the context, and prevents the necessity of arbitrarily supplying the verb *it is*, at the opening of ver. 22, for which there is no authority in the Hebrew. Upon turning to the Septuagint, I find, also, that I am countenanced in this rendering by the translation there offered, which, in v. 23. runs as follows:

Ὁ διδους αρχοντας ὡς ουδεν αρχειν,
ΤΗΝ ΔΕ ΓΗΝ ὩΣ ΟΥΔΕΝ ΕΠΟΙΗΣΕΝ.

The word *curtain*, in v. 22. which I have continued from our standard version, is rendered *awning* by Dr. Stock, who justifies the change by a note cited from bishop Lowth, as occurring in Shaw's Travels. With due deference to these very excellent authorities, I still think the standard rendering the preferable. The kind of curtain, immediately referred to, is that which was suspended in Greece, Rome, and Asia (in which last region the same custom still prevails), over theatres and pleasure-gardens, to screen them from the heat of the sun, and which was drawn or undrawn at option. For a fuller account of which, the reader may turn to the Note on Book IV. v. 80. of the present Poem: and especially to my Translation of the Song of Songs, Idyl ix. Note 12.

The beginning of ver. 24. obviously refers to the graven images in v. 19, 20; and, in bold, metaphorical language, delineates their utter impotence and vanity:

No—they shall not be planted: no—they shall not be sown;
No—their stock shall not take root in the ground:
But he shall blow upon them, and they shall wither,
And the whirlwind shall scatter them like stubble.

The particle אַף, which means either *yea*, or *no*, according to its position, *verily*, *surely*, *omnino*, is here rendered, with much more force, *negatively*, than *affirmatively*, as in our common versions: and it is in this sense, also, that it is understood by the Septuagint. Ου γαρ μη φυτευσωσιν ουδ' μη σπαρωσιν, &c

Ver. 1175. ——*or aught all else assail*
Of nature new, and strange to every sense.]
He means, obviously, in whatever other manner our accustomed habit or mode of life is altered, and exchanged for something new. The version of Gue-

Hæc ratio quondam morborum et mortiferæ vis
Finibus in Cecropiis funestos reddidit agros,
Vastavitque vias; exhausit civibus urbem.
Nam penitus, veniens Ægypti finibus, ortus,
Aëra permensus multum, camposque natanteis,
Incubuit tandem populum Pandionis omnem:
Inde catervatim morbo, mortique, dabantur.

nier is extremely erroneous. "Whether nature of her own accord brings the cruel infection from abroad, or introduces a disease we are not used to, which *upon its first approach may prove hurtful to us.*"

Ver. 1177. *A plague like this, a tempest big with fate*
Once ravag'd Athens, *and her sad domains:*] Throughout the remainder of this Book, the true genius of poetry is, perhaps, more powerfully and triumphantly exhibited than in any other poem that was ever written. I am speaking, however, of the original, being fully persuaded that the present version has no pretensions to such a character. Lucretius has ventured upon one of the most uncouth and repressing subjects to the Muses that can possibly be brought forwards, the history and symptoms of a disease—and this disease accompanied with circumstances naturally the most nauseating and indelicate. It was a subject altogether new to numerical composition, and he had to strive with all the pedantry of technical terms, and all the abstruseness of a science in which he does not appear to have been professionally initiated. He strove, however, and he conquered. In language the most captivating and nervous, yet never indelicate, and with ideas the most precise and appropriate, he has given us the entire history of this tremendous pestilence: there is not, perhaps, a symptom omitted, yet there is not a verse with which the most scrupulous can be offended. Hippocrates and Thucydides, who were eye-witnesses of its fearful effects, and the latter of whom was a personal sufferer beneath them, are the sources of his information; and such is the accuracy with which he has studied these celebrated writers, that the medical student may acquire, from the description before us, an equal degree of entertainment and instruction.

In this bold but successful attempt, Lucretius has been imitated by many poets, both of ancient and modern times. Among his own countrymen, Virgil and Ovid have been the most happy in their efforts, and in later ages Fracastorius, Lope de Robles, and Armstrong.

The plague of Athens, here referred to, occurred in the first year of the Peloponnesian war, and extended, not only over the city of Athens, in which it made its first appearance, but over the whole region of Attica, and in some few instances even beyond it.

Ver. 1180. ——*amid the realms*
Begot of Egypt——] Ἤρξατο δὲ τὸ μὲν πρῶτον, ὡς λέγεται ἐξ Αἰθιοπίας τῆς ὑπὲρ Αἰγύπτου, ἔπειτα δὲ καὶ ἐς Αἴγυπτον καὶ Λιβύην κατέβη, καὶ ἐς τὴν βασιλέως γῆν τὴν πολλήν· ἐς δὲ τὴν Ἀθηναίων πόλιν ἐξαπιναίως ἐνέπεσε. Thucyd. "It commenced, according to report, in that part of Ethiopia which borders upon Egypt: it thence spread itself over Egypt, Lybia, and the

A plague like this, a tempest big with fate
Once ravag'd Athens, and her sad domains:
Unpeopled all her city, and her paths
Swept with destruction. For amid the realms
Begot of Egypt, many a mighty tract
Of ether travers'd, many a flood o'erpast,
At length, here fix'd it; o'er the hapless realm
Of Cecrops hovering, and th' astonish'd race
Dooming by thousands to disease and death.

---

dominions of the King. It invaded Athens on a sudden."

The same deleterious quarter has been equally accused of producing the same evil in modern times. Thus, Thomson:

——From Ethiopia's poisoned woods,
From stiffled Cairo's filth, and fetid fields,
With locust-armies putrefying heap'd,
This great destroyer sprung.

Summer, 1055.

The description here given us by Lucretius has been freely employed by Sebastian Brant, in his *Elogium*, as he strangely calls it, de Pestilentia Scorra, sive Impetigine anni xcvi, which was, unquestionably, the venereal disease on its first introduction into Europe upon the return of Columbus from Hispaniola. The Poem forms a part of his Varia Carmina, Basle, 1498. And the verses immediately before us are thus imitated:

Pestiferum in Ligures transvexit Francia morbum
Quem *mala de Franzos* romula lingua vocat.
Hic Latium atque Italos invasit; ab Alpibus extra
Serpens, Germanos Istricolasque premit, &c.

France to Liguria bore the bane funest
Whence by the vulgar term'd *the Gallic pest*:
To Rome thence winds it, and th' Italian shores,
Climbs the steep Alps, and wide o'er Austria pours.

Ver. 1183. *At length, here fix'd it;——*] Among the imitators of this description of the Athenian pestilence, is Dr. Spratt, bishop of Rochester. His Poem, which is long and tedious, consists of what he calls, a Pindaric Ode, but which exhibits nothing of the genius of Pindar in its composition. It is an irregular dithyrambic, filled with absurdities and conceits. Creech, unhappily, appears to have approved it, and has hence, not unfrequently, copied from it, in his version of this part of Lucretius. Without meaning to take any farther notice, either of Spratt, or the occasional verses for which Creech is indebted to him, I shall only mention that, as an appendix to the verse now before us, the latter has added a couplet from the former, of which Lucretius never furnished him with a tittle of the conceit it contains:

The wind that bore the fate went slowly on,
And, as it went, was heard to sigh and groan.

Ver. 1183. ——*o'er the hapless realm*
Of Cecrops *hovering*, ——] For the history of this prince, see Note on ver. 1, of the present Book.

Ver. 1184. ——*th' astonish'd race*
Dooming by thousands to disease and death.] On which passage Mr. Wakefield reminds us, with happy recollection, of the following of Homer:

Principio, caput incensum fervore gerebant;
Et dupliceis oculos subfusâ luce rubenteis.
Sudabant etiam fauces, intrinsecus atræ,
Sanguine; et ulceribus vocis via sæpta coibat:
Atque, animi interpres, manabat lingua cruore,
Debilitata malis, motu gravis, aspera tactu.

Inde, ubi per fauces pectus conplerat, et ipsum
Morbida vis in cor mœstum confluxerat ægris;
Omnia tum vero vitaï claustra labebant.

Ηκε δ' επ' Αργειοισι κακον βελος· οἱ δε νυ λαοι
Θνησκον επασσυτεροι· Il. A. 382.

The deadly shaft among the Greeks was hurl'd,
And throngs o'er throngs at once forsook the world.

Ver. 1186. *The head first flam'd with inward heat; the eyes*
Reddened with fire suffus'd:——] Thus, Thucydides, l. c. Προτον μεν της κεφαλης θερμαι ισχυραι, και τον οφθαλμων ερυθηματα, και φλογωσις ελαμβανε. "They were attacked with an excessive heat in the head, and redness and inflammation in the eyes."

The entire description, to ver. 1220, is thus elegantly rendered by M. Le Blanc de Guillet.

D'abord ces malheureux, à la vue alarmée,
S'offroient, les yeux ardens, et la tête enflammée.
Bientôt un sang épais suintoit de leur gosier,
Où des ulcères noirs, prompts à se déployer,
Interceptant la voix, l'étouffaient dans la bouche.
De l'ame appesantie, interprète farouche,
La langue foible, rude, et n'ayant qu'un jeu lent,
Se distillait de même en fluide sanglant.
Lorsqu' enfin, du gosier, coulant dans la poitrine,
Ministres dangereux d'une guerre intestine,
Ces poisons, en torrens, la portaient dans le cœur;
Les ressorts de la vie, à leur effort vainqueur,
S'ébranlaient, s'écroulaient, tout prêts à se dissoudre.
Des cadavres infects, pourrissans dans la poudre,
D'une haleine empestée, on exhalait l'odeur.
L'ame était sans ressort; cédant à sa langeur,
A sa destruction, le corps touchait, comme elle.
Et quelle anxieté profonde, universelle!
Quels chagrins douloureux, quels long gémissemens
Mêlés de cris plaintifs de momens en momens!
Quels sanglots, nuit et jour, irritent ces tortures,
Contractent tous les nerfs, les membres, leurs jointures;
Dissolvent l'homme entier, épuisé dès long-temps!
Où donc étaient cachés ces feux si dévorans?
La main, touchant leur peau, ne la sent qu'attiédie.
L'œil ne la voit rougir que du foible incendie
Qu'en ulcères légers répand le feu sacré.
Ah! le brassier n'est vif qu'en leur sein déchiré;
C'est là que, renfermée, est la fournaise ardente,
Y portant jusqu'aux os sa flamme pénétrante.
O que tout vêtement pèse à ces malheureux!
Le tissu le plus fin n'est qu'un fardeau pour eux.
Nus, à l'air le plus froid, dans les plus froides ondes,
Ils cherchent une remède à leurs ardeurs profondes.
J'en vois, bouche béante, aveuglément séduits,
Se trainer, éperdus, s'élancer dans les puits.
Mais quoi? tout l'ocean, les abreuvant sans cesse,
Seraient moins qu'un goutte à la soif qui les presse.

The head first flam'd with inward heat; the eyes
Redden'd with fire suffus'd: the purple jaws
Sweated with bloody ichor: ulcers foul
Crept o'er the vocal path, obstructing close;
And the prompt tongue, expounder of the mind,
O'erflow'd with gore, enfeebl'd in its post,
Hoarse in its accent, harsh beneath the touch.

And when the morbid effluence through the throat
Had reach'd the lungs, and fill'd the fault'ring heart,
Then all the powers of life were loosen'd; forth

Ver. 1187. *Redden'd with fire suffus'd*:] Admirably expressed in the original, ver. 1144:

Et dupliceis oculos subfusâ luce rubenteis;

and well transfused by Marchetti:

——gli orchi rosseggianti, e sparsi
Di sanguinosa luce.

The version of De Coutures is as foreign from his copy, as from the truth: "Les yeux etincelloient sans avoir presque l'usage de leur organe."

Ver. 1187. ——*the purple jaws*] I again follow the copy of Wakefield, as being more animated and significant, ver. 1145:

Sudabant etiam fauces, intrinsecus atræ,
Sanguine;

The common reading is *atro*, referring this adjunct to *sanguine*. And in the same sense, indeed, Virgil himself applies it, in his imitation of this passage:

——it naribus *ater*
Sanguis, et obsessas fauces premit aspera lingua.
GEORG. iii. 507.

The tongue furr'd o'er, th' obstructed palate fills,
And from the nostrils *sable blood* distils.
SOTHEBY.

Ver. 1189. *Crept o'er the vocal path, obstructing close;*] Hence Virgil, as cited by Heyne:

Et *via* vix tandem *voci* laxata dolore est.
ÆN. xi. 150.

The *vocal path* obstructed, scarce at length
Left space for sighing.

Hippocrates and Galen equally notice this symptom. The former, de Morb. Popul. iii. 3—10—11: the latter in the first book of his Commentaries.

Ver. 1193. ——*the morbid effluence through the throat*
Had reach'd the lungs, and fill'd the fault'ring heart,] Thucyd. Και ου πολλω χρονω κατιβαινεν ισχα στηθη ὑπ' αυτης μετα βηχος ισχυρου, και ὁποτε ισταν καρδιαν, &c. "Immediately afterwards, the disease, with a dreadful cough, descended into the præcordia; and, when once fixed there, produced the most fetid vomiting and dysentery that physicians had ever met with, discharged at the same time with excessive torture."

Spiritus ore foras tetrum volvebat odorem,
Rancida quo perolent projecta cadavera ritu:
Atque animi prorsum vires totius, et omne
Languebat corpus, leti jam limine in ipso:
Intolerabilibusque malis erat anxius angor
Adsidue comes, et gemitu commixta querela:
Singultusque frequens noctem per sæpe, diemque,
Conripere adsidue nervos et membra coactans,
Dissolvebat eos; defessos ante fatigans.

Nec nimio quoiquam posses ardore tueri
Corporis in summo summam fervescere partem;
Sed potius tepidum manibus proponere tactum,
Et simul, ulceribus quasi inustis, omne rubere
Corpus, ut est, per membra sacer quom diditur ignis.

Ver. 1199. *Lay they liquescent at the gates of death.*] So, the prophet Samuel, but with still greater boldness of imagery. 2. ch. xiv. 14.

For doubtless must we perish even as *water spilt on the ground*
Which cannot be gathered together again.

Whence the Psalmist, with equal energy and spirit: xxii. 14.

I am *poured out like* water;
Dissolved are my bones;
My *heart*, like wax, is *melted* in my bosom.

Ver. 1202. ——*and hiccough deep,*
And keen convulsive twitchings ceaseless urg'd,] Thucyd des. Λυγξ τε τοις πλειοσιν επεπιπτε κενη, σπασμον ενδιδουσα ισχυρον τοις μεν μεταυτα λαφησαντα τοις δε και πολλα ὑστερον. "The greater number had also a dry hiccough, attended with subsultive convulsions, which, in some, ceased quickly, but, in others, continued with extreme perseverance."

Ver. 1206. *Yet ne'er too hot the system couldst thou mark*
Outwards, but rather tepid to the touch:] Thucyd. Και το μεν εξωθεν απτομενω σωμα, ουκ αγαν θερμον ην, ουτε χλωρον, αλλ' ὑπερυθρον, πελιδνον, φλυκταιναις μικραις, και ελκεσιν εξηνθηκος· τα δε εντος ὡτως εκαιετο, ὡστε μητε των παυ λεπτων ιματιων και σινδονων τας επιβολας, μητ' ἀλλοτι, η γυμνον ανεκεισθαι. "The body, to the external touch, was neither very hot nor very pale; but rather reddish, from a cutaneous efflorescence: yet, inwardly, they burned to such an excess, that

Crept the spent breath most fetid from the mouth,
As steams the putrid carcase: every power
Fail'd through the soul—the body—and alike
Lay they liquescent at the gates of death.
While with these dread, insufferable ills
A restless anguish join'd, companion close,
And sighs commixt with groans; and hiccough deep,
And keen convulsive twitchings ceaseless urg'd,
Day after day, o'er every tortur'd limb,
The wearied wretch still wearying with assault.
Yet ne'er too hot the system couldst thou mark
Outwards, but rather tepid to the touch:
Ting'd still with purple-dye, and brandish'd o'er
With trails of caustic ulcers, like the blaze
Of erysipelas. But all within

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they could not endure the slightest coverlid, nor even their own clothes, but insisted upon continuing perfectly naked."

Ver. 1209. ——*like the blaze*
Of erysipelas.——] Such is the disease to which he compares the red, or rather, purple cutaneous eruption spoken of by Thucydides in the foregoing Note. This erysipelas is denominated, in the original, *sacer ignis*; and, in the common language of the present day, St. Anthony's Fire. Virgil, in his rival description, makes mention of the same symptom:

——nec longo deinde moranti
Tempore, *contactos artus sacer ignis* edebat.
Georg. iii. 565.

Till, o'er each tainted limb, progressive led,
The *sacred* fire, with caustic fury, fed.

In the following of Seneca, we find not only the *sacred fire*, or erysipelas, but a variety of other symptoms narrated by our poet, copied with an undisguised hand:

Oculique rigent, et *sacer ignis*
Pascitur artus: resonant aures,
Stillatque niger naris aduncæ
Cruor, et venas rumpit hiantes.
Intima creber viscera quassat
Gemitus stridens. Œdip. 187.

Stiff stare the eye-balls; o'er the burning limbs
Feeds erysipelas; th' erected ears
Tingle; black ichor from the hollow nose
Distils, and ruptures every gaping vein:
A quick, discordant moan, profoundly pour'd,
Breaks from the vitals.

Intima pars hominum vero flagrabat ad ossa;
Flagrabat stomacho flamma, ut fornacibus, intus:
Nihil adeo posses quoiquam leve tenueque membris
Vortere in utilitatem: ad ventum et frigora semper,
In fluvios partim gelidos, ardentia morbo
Membra dabant, nudum jacientes corpus in undas.
Multei præcipites nymphis putealibus alte
Inciderunt, ipso venientes ore patente:
Insedabiliter sitis arida, corpora mersans,
Æquabat multum parvis humoribus imbrem.

Nec requies erat ulla mali: defessa jacebant
Corpora; mussabat tacito Medicina timore:
Quippe patentia quom totiens, ardentia morbis,
Lumina vorsarent oculorum, expertia somno;

Of the *sacer ignis*, or erysipelas, here spoken of, Celsus enumerates two distinct species, de Re Medic. vi. 8.: one in which there is an eruption reddish, or slightly red, highly irritable, and accompanied with permanent and extremely diminutive vesicles equable in size; the other, consisting of a mere efflorescence of the skin, unprominent, sublivid, and irregular in its diffusion.

Ver. 1212. ——*nor would once endure*
The lightest vest thrown loosely o'er the limbs.] Whence doubtless, Ovid:

Non stratum, non ulla pati velamina possunt.
Met. vii. 558.
Nor warmth of bed, nor raiment would they bear.

Ver. 1215. ——*in the gelid stream*
Plunging their fiery bodies, to be cool'd:] Diodorus Siculus relates this fact in almost the same terms, lib. xii. And Thucydides asserts, that many of the sick made such attempts, and would have thrown themselves headlong into the wells and rivers, if they had not been suddenly prevented. To which he adds, that it seemed altogether a matter of indifference whether they drank much or little; such was the insatiable thirst with which they were tormented. Ἥδιστα τε ἂν ἐς ὕδωρ ψυχρὸν σφᾶς αὐτοὺς ῥιπτεῖν, καὶ πολλοὶ τοῦτο τῶν ἡμελημένων καὶ ἔδρασαν ἐς φρέατα τὴν διψῆν ἀπαύστῳ ξυνεχομένοις, καὶ ἐν τῷ ὁμοίῳ καθεισηκέι τὸ τε πλέον καὶ ἔλασσον πότου.

Burn'd to the bone; the bosom heav'd with flames
Fierce as a furnace, nor would once endure
The lightest vest thrown loosely o'er the limbs.
All to the winds, and many to the waves,
Careless, resign'd them; in the gelid stream
Plunging their fiery bodies, to be cool'd:
While some, wide-gasping, into wells profound
Rush'd all abrupt; and such the red-hot thirst
Unquenchable that parch'd them, amplest showers
Seem'd but as dew-drops to th' unsated tongue.
Nor e'er relax'd the sickness; the rack'd frame
Lay all-exhausted, and, in silence dread,
Appall'd, and doubtful, mus'd the Healing Art.
For the broad eye-balls, burning with disease,
Roll'd in full stare, for ever void of sleep,
And told the pressing danger; nor alone

Ver. 1222. ——*in silence dread,*
Appall'd, and doubtful, mus'd the Healing Art.] This, perhaps, is one of the happiest and most characteristic personifications that ever was conceived by any poet. The fearful amazement and perplexity of a physician, in a situation like this, cannot possibly be described in terms more striking and appropriate. Armstrong has thus imitated it, but, I think, unequally:

——The Salutary Art
Was mute; and, startled at the new disease,
In fearful whispers hopeless omens gave.
Art of Preserv. Health, iii.

Virgil had thus preceded him in an imitation:

Quæsitæque nocent artes: *cessere magistri.*
Georg. iii. 549.

Vain proves each former art t' assuage the pain;
The Sires of Medicine strive, and toil in vain.
Warton.

Yet, even without an imitation, there is a still nearer resemblance in the following beit of Hariri:

قد اعجز الراقي تحليل صابه
من لدا واعيا الطبيب

Dumb stood th' enchanter; troubled deep at heart,
The pale physician drop'd the healing art.

Multaque præterea mortis tum signa dabantur.
Perturbata animi mens, in mœrore, metuque;
Triste supercilium, furiosus voltus, et acer;
Solicitæ porro, plenæque sonoribus, aures:
Creber spiritus, aut ingens, raroque coortus;
Sudorisque madens per collum splendidus humos:
Tenuia sputa, minuta, croci contacta colore,
Salsaque, per fauces raucâ vix edita tusse.
In manibus vero nervei trahere, et tremere artus;
A pedibusque minutatim subcedere frigus
Non dubitabat: item, ad supremum denique tempus,
Conpressæ nares, nasi primoris acumen
Tenue, cavatei oculei, cava tempora; frigida pellis,
Duraque, inhorrebat tactum; frons tenta meabat:
Nec nimio rigidâ post artus morte jacebant;
Octavoque fere candenti lumine solis,
Aut etiam nonâ reddebant lampade vitam.

Ver. 1228. *The mind's pure spirit,——*] See Note on Book IV. v. 774. and Book V. v. 155. So, Young, in his Night Thoughts:

——drink the *spirit* of the golden day,
And triumph in existence. Night iv.

Ver. 1231. *Frequent the breath; or pond'rous, oft;—*] In the original, v. 1184:

Creber spiritus, aut ingens, raroque coortus.

In the edition followed by Marchetti and De Coutures, the lection, instead of *aut*, is *ac;* in some others it is *haud;* both equally wrong.

Ver. 1231. *——pond'rous, oft, and rare;*] Hence Armstrong:

——Thick and pantingly
The breath was fetch'd, and with huge labourings heav'd. Art of Pres. Health.

Ver. 1234. *—with hoarse cough scarce labour'd from the throat.*] I read with the Florentine, and many other copies, v. 1187:

Told it, for many a kindred symptom throng'd.
The mind's pure spirit, all despondent, rav'd;
The brow severe; the visage fierce and wild;
The ears distracted, fill'd with ceaseless sounds;
Frequent the breath; or pond'rous, oft, and rare;
The neck with pearls bedew'd of glist'ning sweat;
Scanty the spittle, thin, of saffron dye,
Salt, with hoarse cough scarce labour'd from the throat.
The limbs each trembled; every tendon twitch'd
Spread o'er the hands; and from the feet extreme
O'er all the frame a gradual coldness crept.
Then, tow'rds the last, the nostrils close collaps'd;
The nose acute; eyes hollow; temples scoop'd;
Frigid the skin, retracted; o'er the mouth
A ghastly grin; the shrivell'd forehead tense;
The limbs outstretch'd, for instant death prepar'd;
Till with the eighth descending sun, for few
Reach'd his ninth lustre, life for ever ceas'd.

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per fauces raucâ vix edita tusse.

In the common editions we find *raucas*, agreeing with *fauces*, but far less elegantly. These, and most of the accompanying symptoms, are related by Hippocrates in his Coan Prognostics. For the cough here enumerated, see also Thucydides, as cited in Note on v. 1193.

Ver. 1242. *The limbs outstretch'd, for instant death prepar'd;*] In almost all the old manuscripts, v. 1194:

Nec nimio rigida post artus morte jacebant.

In some few copies, for *post artus*, we meet with *prostrati*; in Lambinus, who is followed by the generality of modern editors, *post strati*. The variation in both cases, is an unquestionable injury.

Ver. 1243. *Till with the eighth descending sun, for few*
Reach'd his ninth lustre, life for ever ceas'd.] Thucydides.—διεφθείροντο δὲ πλείστοι πολλαῖς καὶ ἐδόκουν ὑπὸ τοῦ ὀπτῆς καύματος, ἰσχυροί τι δύναμιν,

Quorum si quis, ut est, vitarat funera leti,
Visceribus tetris, et nigrâ proluvie alvi;
Posterius tamen hunc tabes, letumque, manebat:
Aut etiam multus capitis cum sæpe dolore
Conruptus sanguis expletis naribus ibat;
Huc hominis totæ vires, corpusque fluebat.

Profluvium porro qui tetri sanguinis acre
Exierat, tamen in nervos huic morbus et artus
Ibat, et in parteis genitaleis corporis ipsas:
Et graviter partim metuentes limina leti
Vivebant, ferro privatei parte virili;
Et manibus sine non nullei, pedibusque, manebant
In vitâ tamen, et perdebant lumina partim:
Usque adeo mortis metus hiis incusserat acer.
Atque etiam quosdam cepere oblivia rerum
Cunctarum, neque se possent cognoscere ut ipsei.

"Most of them died of the extreme internal heat which preyed upon them, in seven or nine days, even prior to their total loss of strength."

Ver. 1245. —*at times, th' infected death escap'd*
From sanious organs, or the lapse profuse] Thucydides. Η, ει διαφυγοιεν, επικατιοντος του νοσηματος ες την κοιλιαν και ελκωσεως τε αυτη ισχυρας εγγιγνομενης, και διαρροιας αμα ακρατου επιπιπτουσης, οι πολλοι υστερον δια την ασθενειαν διεφθειροντο. "If they even escaped the destruction of this internal flame, then the disease descended into their bellies, and produced either such immoderate fluxes, or such dreadful ulcers, that many of them died afterwards from weakness alone."

Ver. 1246. ——*sanious organs*——] In the text, v. 1198:

Visceribus tetris——

a lection daringly and uselessly changed by Lambinus to

Ulceribus tetris——

in which he has, nevertheless, been followed by the majority of editors.

Ver. 1252. ——*frequent still*
Fix'd the morbific matter on the limbs,] Thus the Greek historian: Διεξηει γαρ δια παντος του σωματος, ανωθεν αρξαμενον, το εν τη κεφαλη πρωτον ιδρυθεν

And though, at times, th' infected death escap'd
From sanious organs, or the lapse profuse
Of black-ting'd feces, fate pursu'd them still.
Hectic and void of strength, consumption pale
Prey'd on their vitals; or, with head-ach keen,
Oft from the nostrils tides of blood corrupt
Pour'd unrestrain'd, and wasted them to shades.
And, e'en o'er these triumphant, frequent still
Fix'd the morbific matter on the limbs,
Or seiz'd the genial organs; and to some
The grave so hideous, they consented life
E'en with th' excision of their sexual powers
Dearly to ransom: some their being bought
By loss of feet or hands; and some escap'd
Void of all vision; such their dread of death.
And in oblivion some so deep were drown'd
Themselves they knew not, nor their lives elaps'd.

κακοι, και ει τις εκ των μεγιστων, περιγενοιτο, των γε ακρωτηριων αντιλαβης αυτου επισημαινε, κατεσκηπτε γαρ και ες τα αιδοια, και ες ακρας χειρας, και ποδας· και πολλοι στερισκομενοι τουτων διεφυγον, εισι δε οι και των οφθαλμων. "For this disease, which first of all attacked the head, gradually descended, and passed through the whole body: and whoever escaped these first stages of it was, nevertheless, maimed with the loss of some of his extreme organs: in many, the sexual members were destroyed; and in many, the toes and fingers; while others, again, were deprived of their eyesight."

Ver. 1260. *And in oblivion some so deep were drown'd Themselves they knew not,*——] Thus the elegant author just quoted: Τους δε και λησμονη ελαμβανε παραυτικα αναστανταις των παντων εμοιως· και γενεσθαι σφας τε αυτους, και τους επιτηδειους. "And many, on recovery, still experienced such an extraordinary oblivion of all things, that they knew neither themselves, nor their friends."

Ver. 1262. *And though, unburied,*——] We here once more trace a reference to Thucydides: Τα γαρ ορνια και τετραπεδα, οσα ανθρωπων απτεται, τοτε των ταφων

Multaque humi quom inhumata jacerent corpora supra
Corporibus, tamen alituum genus, atque ferarum,
Aut procul absiliebat, ut acrem exiret odorem;
Aut, ubi gustarat, languebat morte propinquâ.

Nec tamen omnino temere illis solibus ulla
Comparebat avis, neque noxia secla ferarum
Exibant sylvis; languebant pleraque morbo,
Et moriebantur: cum primis fida canum vis
Strata viis animam ponebat in omnibus ægre:
Extorquebat enim vitam vis morbida membris.
Incomitata rapi certabant funera vasta.

γιγνομεναι, η ου προσηει, η γευσαμενα διεφθειρετο. "The birds and beasts, who were accustomed to feed on human flesh, though multitudes of corses lay abroad unburied, either kept aloof from them, or perished upon tasting."

Ver. 1264. *The forest monsters, either far aloof*] So, Virgil, in his rival attempt:

Non lupus insidias explorat ovilia circum,
Nec gregibus nocturnus obambulat: acrior illum
Cura domat: timidi damæ cervique fugaces
Nunc interque canes et circum tecta vagantur.
Jam maris immensi prolem, et genus omne natantum
Littore in extremo, ceu naufraga corpora, fluctus
Proluit; insolitæ fugiunt in flumina phocæ.
Interit et curvis frustra defensa latebris
Viperæ, et attoniti squamis astantibus hydri.
Ipsis est aër avibus non æqus; et illæ
Præcipites altâ vitam sub nube relinquunt
Georg. iii. 537.

The famish'd wolf, by fiercer pangs subdu'd,
Nor heeds the fold, nor prowls for nightly food;
The tim'rous does mid hounds securely rest,
And the stag haunts the roof, a willing guest.
Cast on the strand, infected shoals on shoals
Like shipwreck'd corses ocean slowly rolls;
Unwonted Phocæ fly their native tide,
And mid strange rivers strive their fears to hide.
Fenc'd in their caves in vain the vipers lie,
Astonish'd hydras rear their scales and die;
And birds that press their flight before the wind,
Fall in mid air, and leave their lives behind.
Sotheby.

Ver. 1270. *But chief the dog his generous strength resign'd,*] Thus, again, the Greek historian: Οι δε κυνες μαλλον αισθησιν παρειχον του αποβαινοντος δια το ξυνδιαιτασθαι. "But this attack upon animals was rendered more conspicuous in the case of dogs, because of their greater familiarity." I have been informed, that a similar mortality prevailed among dogs in the late terrible pestilence that attacked the town and garrison of Gibraltar. Mr. Wakefield, on

And though, unburied, corse o'er corse the streets
Oft throng'd promiscuous, still the plumy tribes,
The forest monsters, either far aloof
Kept, the foul stench repulsing, or if once
Dar'd they the plunder, instant fate pursu'd.
Nor feath'ry flocks at noon, nor beasts at night
Their native woods deserted; with the pest
Remote they languish'd, and full frequent died.
But chief the dog his generous strength resign'd,
Tainting the high-ways, while the ruthless bane
Through every limb his sick'ning spirit drove.
With eager strife th' enormous grave was snatch'd,

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this verse, reminds us of the following verse in the Iliad:

Ουρηας μεν πρωτον επωχετο, και κυνας αργους.
A. 50.

On mules and dogs th' infection first began.
Pope.

To the same effect, Virgil:

Hinc canibus blandis rabies venit——

Next struck the pest the gentle race of dogs.

Ver. 1273. *With eager strife th' enormous grave was snatch'd,*] Nothing can exceed this forcible and tremendous description, ver. 1223:

Incomitata rapi certabant funera vasta.

Funeral ceremonies were performed with more pomp and precision among the Athenians than among any other people, whether the corse were burnt, embalmed, or buried; for their religion allowed them an option in all these different ways. Of these methods, however, the funeral pyre was generally accompanied with the greatest degree of magnificence and pageantry. But in the present period, such splendid solemnities could, in no respect, be complied with; and to remedy the evil, as far as possible, large excavations were dug in the suburbs of the city, as so many graves for general use, and to which every one had an equal access. Such, however, was the perpetual crowd of corses conveyed to these common burying-places, by those who were employed to inter the dead, that it was necessary for them, as our poet daringly expresses it, to *snatch* at the first opportunity that offered, in order to deposit their trust, and obtain a release from the infectious burden.

The same metaphor is adopted by Gray in the following couplet:

They hear a voice in every wind,
And *snatch* a fearful joy. Eton Coll.

A similar description of hasty and indecorous interment is related by Boccaccio in his description of the dreadful plague that raged at Florence about the middle of the fourteenth century. Proem. Decam. Ed errano radi coloro, i corpi de' quali fosser' piu che da un dieci, o dodici de suoi vicini alla chiesa

Nec ratio remedii communis certa dabatur:
Nam, quod alii dederat vitaleis aëris auras
Volvere in ore licere, et cœli templa tueri,
Hocc' aliis erat exitio, letumque parabat.

Illud in hiis rebus miserandum magno opere unum
Erumnabile erat; quod, ubei se quisque videbat
Inplicitum morbo, morti damnatus ut esset,
Deficiens animo, mœsto quom corde jacebat,
Funera respectans, animam inmittebat ibeidem.
Quippe et enim nullo cessabant tempore apisci
Ex aliis alios avidi contagia morbi;
Lanigeras tamquam pecudes, et bucera secla:

accompagnati, de' quali non gl' onrevoli, e cari cittadini, ma una maniera di beccamorti sopra venuta, di minuta genti che chiamar si facevano Bechini, la quale questi scruigi prezzolata faceva, sottentravano alla bara, e quella con frettolosi passi, non a quella chiesa, ch' esso avevan anzi la morte disposto, ma alla più vicina, le più volte le portavano, dietro a quatro ò sei clerici con poco lume, e tal fiata senz' alcuno, gli quali con l'aiuto di detti Bechini, senza fatigarsi in troppo longo ufficio, ò solenne, in qualunque sepaltura disoccupata trovavano, più tosto le mettevano. "Few bodies were accompanied to the church-yard by more than ten or twelve of the neighbouring inhabitants, and these not respectable and beloved citizens, but a hired company, who, for a sum paid them, engaged to perform the office; and carried the body, not to the church where the dead person had requested to be carried, but, for the most part, to that nearest at hand, and at which they could speediest arrive. They were attended by not more than four or six priests, sometimes totally without torches; and, in this manner, they threw the corse hastily into the first grave which was unoccupied."

Ver. 1274. ——*nor was aught of cure*
Discern'd specific; for what here recall'd]
Thus, again, the Grecian historian: εν τε ουδεν κατεστη ιαμα. ως εἰτειν, ὁ τι χρην προσφερονταϛ ωφελειν· το γαρ τω ξυνενεγκοι αλλοι τουτο τον απτει. "Nor was there any fixt medicine that could be depended upon, for if it assisted in one case, it uniformly injured in another."

Thus, Ovid:

Nec moderator adest; inque ipsos sæva medentes
Erumpit clades; obsuntque auctoribus artes.
Quo propior quisque est, servitque fidelius ægro,
In partem leti citius venit. Utque salutis
Spes abit, finemque vident in funere morbi;
Indulgent animis; et nulla, quid utile, cura est,
Utile enim nihil est. Met. vii. 561.

By friends untended: nor was aught of cure
Discern'd specific; for what here recall'd
To day's bright regions the vanescent soul,
And gave the living ether to the lips,
Prov'd poison there, and ten-fold stamp'd the fate.
But this the direst horror, that when once
Man felt th' infection, as though full forewarn'd
Of sure destruction, melancholy deep
Prey'd o'er his heart, his total courage fail'd,
Death sole he look'd for, and his doom was death.
Thus seiz'd the dread, unmitigated pest
Man after man, and day succeeding day,
With taint voracious: like the herds they fell

At hand no soother: mid the healing tribe
Bursts the dire pest, their science now their bane.
While those more duteous, towards the sick who press,
More certain perish: and, as hope subsides,
And towards the grave with surer step they tend,
Each wish they flatter, *heedless what may harm,*
Or what may help them; for no help is theirs.

Ver. 1277. ——*gave the living ether to the lips,*] Thus, Thomson:

As thus th' *effulgence* tremulous *I drink.*
SEASONS, ii. 1698.

Ver. 1279. *But this the direst horror, that when once Man felt th' infection,*——] So, Armstrong:

——Of every hope depriv'd
Fatigued with vain resources, and subdu'd
With woes resistless, and enfeebling fear
Passive they sunk beneath the weighty blow.
ART OF PRES. HEALTH.

The fact alluded to by Lucretius is thus confirmed by the Grecian historian: Δεινοτατον δε παντος κακου ἡ τε αθυμια, ὁποτε τις αισθοιτο καμνων, προς ἡν το ανελπιστον ευθυς τραπομενοι τῃ γνωμῃ, πολλῳ μαλλον προιεντο σφας αυτους, και ουκ ανετειχον. "But the greatest evil of all was the dejection of mind which all experienced; the moment they began to sicken, they immediately fell into a state of despair, and made no resistance to their fate."

To which effect, Milton:

——Despair
Tended the sick, busiest from couch to couch.

Ver. 1286. ——*like the herds they fell*
Of bellowing beeves, or flocks of countless sheep:] Thus, Thucydides: Ετερος υπ' ετερου θνησκων; αναπιμπλαμενοι, ὡς τις τα προσκατα ἐθνησκον. "Infecting one another with the common visitation, they died like flocks of sheep."

Mr. Wakefield, on the verse before us, recalls our attention to the following in the Odyssey:

Idque vel in primis cumulabat funere funus.
Nam, queiquomque suos fugitabant visere ad ægros,
Vitaï nimium cupidos mortisque timenteis
Pœnibat paullo post turpi morte malâque,
Desertos, opis experteis, Incuria mactans.
Quei fuerant autem præsto, contagibus ibant,
Atque labore, pudor quem tum cogebat obire,
Blandaque lassorum vox, mixtâ voce querelæ:
Optumus hoc leti genus ergo quisque subibat.

Inque aliis alium, populum sepelire suorum
Certantes, lacrumis lassei luctuque redibant.
Inde, bonam partem, in lectum mœrore dabantur:
Nec poterat quisquam reperiri, quem neque morbus,

Αλλα μοι Αιγισθος τειχας θανατον τε, μοροντε,
Εκτα, συν οιλομενη αλοχω· οικονδε καλεσσας,
Δειπνισσας· ὡς τις τε κατεκτανε βουν επι φατνη
Ὡς θαιον οικτιστω θανατω· περι δ' αλλοι εταιροι
Ναλειμαι κτειροντο, συες ὡς αργιοδοντες. A. 408.

Thus by the gory arm of slaughter falls
The stately ox, and bleeds within the stalls.—
Thick as the boars for costly banquets slain
Beneath the stroke we perish o'er the plain.
Pope.

In the common editions of Lucretius, the above verses occur a few lines earlier; but the different manuscripts vary in their position. I have followed the order proposed by Bentley, and adopted by Wakefield.

Ver. 1294. *While those who nurs'd them,——*] Both this and the foregoing observation are accurately noticed in the history of Thucydides: but it is useless to quote further. It is sufficiently obvious, that our poet has been sedulously attentive to the delineation of actual symptoms and circumstances, as previously described by a fellow-sufferer in the calamity.

Ver. 1296. *——the best, by far,*
The worthiest, thus most frequent met their doom.] The version of Creech is outrageously erroneous:

This kind of death was best; so men did chuse
(A wretched choice) this way their life to lose.

Of bellowing beeves, or flocks of tim'rous sheep:
On fun'ral fun'ral hence for ever pil'd.
E'en he who fled th' afflicted, urg'd by love
Of life too fond, and trembling for his fate,
Repented soon severely, and himself
Sunk in his guilty solitude, devoid
Of friends, of succour, hopeless, and forlorn.
While those who nurs'd them, to the pious task
Rous'd by their prayers, with piteous moans commixt,
Fell irretrievable: the best, by far,
The worthiest, thus most frequent met their doom.
From ceaseless sepultures, where each with each
Vied in the duteous labour, they return'd
Faint, sad, and weeping; and from grief alone
Oft to their beds resistless were they driven.
Nor liv'd the mortal then, who ne'er was tried

The imitation of Armstrong is a better, and more faithful version:

——twas all the business then
To tend the sick, and in their turns to die.

Ver. 1298. *From ceaseless sepultures, where each with each*
Vied in the duteous labour,——] This gradual increase of misery is dextrously and scientifically adhered to: we have now attained another stage of public calamity, and the hireling mourners, either from mortality among themselves, or the fearful expectation of mortality, relinquish their occupation, and will no longer sell their melancholy labour. But the sacred duty of burial must be performed at all adventures: and, severe as is the task, friend is now under the necessity of performing it for friend, and of loading himself with the care of the deceased. In this heart-rending trial, however, they still persevere with a generous and unconquerable emulation.

Ver. 1302. *Nor liv'd the mortal then, who ne'er was tried*] Thus imitated by Armstrong:

Of many thousands, few untainted 'scaped,
Of those infected, fewer 'scaped alive:
Of those who liv'd, some felt a second blow,

Nec mors, nec luctus, tentaret tempore tali.
Præterea, jam pastor, et armentarius omnis,
Et robustus item curvi moderator aratri,
Languebat; penitusque casâ contrusa jacebant
Corpora, paupertate et morbo dedita morti.
Exanimis pueris super exanimata parentum
Corpora non numquam posses retroque videre
Matribus et patribus gnatos super edere vitam.
Nec minumam partem ex agris mœros is in urbem
Confluxit; languens quem contulit agricolarum
Copia: conveniens ex omni morbida parte,
Omnia condebant loca, tectaque; quod magis æstûs
Conferto situ acervatim Mors adcumulabat.

Multa, siti prostrata, viam per, proque voluta,

Ver. 1306. *Languish'd remote; and in their wretched cots*
Sunk,——] Thus, Armstrong again:

Some sad at home, and in the desert some
Abjur'd the fatal commerce of mankind
In vain.——
—— the circumambient heaven
Involv'd them still, and every breeze was bane.

But Virgil, still more in point:

Nunc quoque post tanto videat, desertaque regna
Pastorum, et longe saltus lateque vacantes.
Georg. iii. 474.

Lo! waste and wild the plains appear around;
E'en, yet deserted, stands the shepherd's cot,
And the lone lawns evince the fatal lot. Warton.

To the same effect, Thomson:

——the circling sky,
The wide-enlivening air is full of fate;
And, struck by turns, in solitary pangs,
They fall unblest, untended, and unmourn'd.

Ver. 1308. *O'er breathless sires their breathless offspring lay,*
Or sires and mothers o'er the race they bore.]
Imitated thus, in the Poem on the Art of Preserving Health:

In heaps they fell, and oft one bed, they say,
The sickening, dying, and the dead contain'd.

But this does not convey the entire idea of Lucretius, nor copy its most pathetic features. Klopstock has been far more happy:

With death, with sickness, or severest woe.
Then the rude herdsman, shepherd, and the man
Of sturdiest strength, who drove the plough afield,
Languish'd remote; and in their wretched cots
Sunk, the sad victims of disease and want:
O'er breathless sires their breathless offspring lay,
Or sires and mothers o'er the race they bore.

Nor small the mis'ry through the city oft
That pour'd from distant hamlets; for in throngs
Full flock'd the sick'ning peasants for relief
From every point diseas'd; and every space,
And every building crowded; heightening hence
The rage of death, the hillocks of the dead.
Some, parch'd with thirst, beneath th' eternal spout

In dem arme der liebendem mutter, die gern mit ihr stürbe,
Und nicht sterben kann, stirbt die tochter. Umfast von dem vater,
Und an sein herz gedrückt, stirbt auch der jüngling im aufblühn,
Seines vaters einziger sohn. Vor jammernden kindern
Sterben aeltern, ihr trost, und die stütze der wankenden jahre. Messias, G. V.

In the fond mother's arms to die who sighs,
Sighs but in vain, the languid daughter dies:
Strain'd to his heart, the sire his son surveys,
His only son, in youth's bewitching days
Drop lifeless from him: orphans, now forlorn,
From their frail age weep friends and guardians torn.

Ver. 1311. ——*for in throngs*
Full flock'd the sick'ning peasants for relief] This trait in the dreadful description, is also narrated at length by Thucydides, and constitutes a part of the delineation of the parallel pestilence so admirably painted by Armstrong:

Frantic with fear, they sought by flight to shun
The fierce contagion. O'er the mournful land
Th' infected city pour'd her hurrying swarms.
Rous'd by the flames that fired her seats around,
Th' infected country rushed into the town.
Art of Pres. Health, iii.

Ver. 1316. *Some, parch'd with thirst, beneath th' eternal spout*
Dropp'd of the public conduits;——] This fact is attested in terms so perfectly assimilated to the

Corpora, silanos ad aquarum structa, jacebant,
Interclusâ animâ nimiâ ab dulcedine aquarum:
Multaque per populi passim loca prompta, viasque,
Languida semianimo cum corpore membra videres,
Horrida pædore, et pannis cooperta, perire
Corporis inluvie: pellis super ossibus una,

---

present, in the above history of Thucydides, that I cannot avoid copying the passage: Και εν ταις οδοις εκαλινδουντο, και περι τας κρηνας απασας ημιθνητες, τη του ὑδατος επιθυμια. "And they lay insensible and half dead in the public kennels, and about every conduit, through an insatiable thirst for water."

Ver. 1318. ——*its dulcet draught*] In the original, ver. 1264:

——nimiâ ab *dulcedine aquarum*.

Not widely different from an idea in the following couplet of Hawes's Graunde Amoure, a ballad published in the reign of Henry VII:

And on the toppe four dragons blewe and stoute
The dulcet water in four parts did *spoute*.

Ovid has copied this passage from our poet, and enlarged upon it with no unhappy periphrasis:

——Passim, positoque pudore,
Fontibus, et fluviis, puteisque capacibus hærent;
Nec prius est extincta sitis, quam vita, bibendo.
Inde graves multi nequeunt consurgere, et ipsis
Immoritur aquis. Met. vii. 567.

Heedless, their limbs, all sense of shame forgot,
Along the public conduits, streams and springs,
Threw they; nor ceas'd their thirst till life expir'd:
Whence never rose they oft, but mid the waves
Perish'd, promiscuous.

Ver. 1319. ——*Some at large*
Threw o'er the highways, and the rugged streets]

Equally tremendous, and curiously similar, is the prophetic picture of Amos, v. 16:

Therefore, thus saith Jehovah, the Lord God of hosts:
Lamentation shall be *in all the streets*,
And in the *high ways* shall they cry, alas! alas!
Even the *husbandman* shall join in the scream of misery.

Ver. 1323. ——*o'er the bones*
Skin only, nought but skin;——] We are here reminded by Wakefield, of Homer's Odyssey, N. 430:

Ως αρα μιν φαμενη ραβδω επεμασσατ' Αθηνη
Καρψε μεν οι χροα καλον ενι γναμπτοισι μελεσσι.

She spake: then touch'd him with her powerful wand;
The skin shrunk up, and wither'd at her hand. Pope.

The following description of Juvenal, however, is far more spirited, as well as more in unison with Lucretius:

——tetrum ante omnia vultum,
Dissimilemque sui: deformem *pro cute pellem*.
Sat. x. 192.

His face most squalid, most unlike himself,
And clad with *wither'd cuticle for skin*.

Yet, perhaps, both Lucretius and Juvenal had their eye less directed to Homer than to Plautus:

Macesco, consenesco, et tabesco miser:
Ossa atque pellis sum misera macritudine. In Capt.

And again:

Qui ossa atque pellis totus est, ita cura macet.

Dropp'd of the public conduits; in the stream
Wallowing unwearied, and its dulcet draught
Deep-drinking till they bursted. Stagg'ring, some
Threw o'er the high-ways, and the streets they trod, 1320
Their languid limbs; already half-extinct,
Horrid with fetor, stiff with blotches foul,
With rags obscene scarce cover'd; o'er the bones
Skin only, nought but skin; and drown'd alike

Among the Hebrew poets the same imagery is common, and, at all times, employed with great boldness and success. Thus, Job, xix. 20:

כעורי ובבשרי רבקה עצמי
והתמלטה בעור שני

My bone cleaveth to my skin and my flesh;
Merely have I escaped with the film of my teeth.

The last line of this couplet has not hitherto been properly understood by the commentators, and has hence been supposed obscure and difficult. The common reading, "*and* I have escaped with the *skin* of my teeth," though adopted in most modern languages, is not easily intelligible. Schultens asserts, that by the *skin* of the teeth is meant the *gums;* but, incapable of explaining the phrase appropriately, he conveniently resolves it into a proverbial idiom, while Reiske asserts, without evidence, that the term בעור, "of my skin," is an interpolation, and, as such, ought to be rejected. In my conception, adds he, the second part of the period is an elegant iteration to which Job often recurs. His words are as follow: "ואתמלטה שני excidit dens meus. Vulgata lectio hunc sensum fundit. Cum cute mea, et cum carne mea cohæret os meum. Sic, Arabes, تلاحق dicunt et simpliciter, لحق coaluit, *er ist zusammen gebacken*, pro emacuit, collapsus fuit. Vulgatam lectionem qui retinebit ei בעור ante שני delendum erit; nam turbat. In conjectura mea, בעור בעורי est elegans alliteratio, quam Jobus persæpe affectat." On the rendering I have given, I trust, however, it is sufficiently obvious, that there is no necessity, either for rejecting any part of the passage, or generalizing it into a national adage. The Hebrew ך, in our own standard version rendered *and*, is, in the present case, a particle of limitation—*merely, solely;* and the term בישן, (besr) means *film* as distinctly as *skin:* the Arabians use the same word, بشر and بشرة in both senses, to the present day. The phrase "*film*, or *fur* of the teeth," after a long and febrile disease, requires no explanation; and the patriarch, in bold but impressive language, intimates, that so much was he wasted or emaciated by his malady, that this was the whole that remained of him. The passage has been imitated both by David and Jeremiah. Thus the former:

Smitten like the *withered* grass is my heart
Since I have forgotten to eat my food;
From the loudness of my lamentation my bones
cleave to my skin. Ps. cii. 4.

The latter, as follows:

Blacker is their visage than a coal;—they are not known in the streets:
Their skin *cleaveth to their bones;* it is become *withered* as a stick. Lam. iv. 8

Thus elegantly rendered into Spanish by Count Bernardino de Rebolledo:

De las nativas rocas arrancados,
Que las tinieblas mas se escurecieron;
Sus mismas calles no los conoscieron.
Que su piel a los huesos se ha pegado:
Qual leño se han secado.

Visceribus tetris prope jam, sordique, sepulta.
Omnia, denique, sancta deûm delubra replerat
Corporibus Mors exanimis, onerataque passim
Cuncta cadaveribus cœlestum templa manebant;
Hospitibus loca quæ conplerant ædituentes.
Nec jam religio divôm, neque numina, magni
Pendebantur enim: præsens dolor exsuperabat.
Nec mos ille sepulturæ remanebat in urbe,
Quo pius hic populus semper consuerat humari:
Perturbatus enim totus repedabat, et unus

Ver. 1325. ——*with putrescent grume.*] The whole passage is copied by Virgil, with close imitation:

——sed, ubi ignea venis
Omnibus acta sitis miseros adduxerat artus,
Rursus abundabat fluidus liquor; omniaque in se
Ossa minutatim morbo collapsa trahebat.

Georg. ii. 482.

——when the parching pain
Had shrunk the limbs, and throbb'd in every vein,
A poisonous humour flowed from all the frame,
Till every bone one putrid mass became.

Warton.

Fracastorio has a passage not dissimilar in his Syphilis, and in writing which, he appears to have had his eyes directed to our poet. He is describing the deplorable state of a youth, suffering under this loathsome disease: and the description has much beauty, omitting the incongruity of the metaphors "*pascebant oculos*," "*pascebantque* nares" in this place; on which I have already animadverted in Note on Book I. 38.

Paulatim vernid nitidum, flos ille juventæ
Disperit, vis illa animi; tum squalida tabes
Artus (horrendum!) miseros obduxit, et alte
Grandia turgebant fœdis abscessibus ossa.
Ulcera (proles divûm pietatem!) informia pulchros
Pascebant oculos, et diæ lucis amorem,
Pascebantque acri corrosas vulnere nares.
Illum Alpes vicinæ, illum vaga flumina flerunt;
Illum omnes Ollique Deæ, Eridanique puellæ
Fleverunt, nemorumque Deæ rurisque puellæ;
Sebinusque alto gemitum lacus edidit amne.

Fades, by degrees, that lovely spring of life,
That flower of youth, that energy of mind.
Putrescence gross, O heavens! his limbs devours;
Swells every bone imposthum'd—ulcers foul
Feed, powers of mercy! feed the beauteous eye,
The day's sweet lustre; feed with acrid grume
Th' eroded nostrils, sick'ning at the scent.
Him the steep Alpine hills, the floods bemoan,
Through all their windings—him the goddess-forms
Of Oglio and Eridanus, the nymphs
Haunting the woods, the plain's dishevell'd fair,
And Sebinus through all his troubled lake.

Camoens, in his description of the sea-scurvy, seems to have been indebted to the same common type:

E foy que de doença crua e fea
A mais que eu nunca vi, desemperàram
Muitos a vida ed em terra estranha ed álhea
Os ossos pera sempre sepultàram:

Within and outwards, with putrescent grume.
At length the temples of the Gods themselves,
Chang'd into charnels, and their sacred shrines
Throng'd with the dead: for superstition now,
The power of altars, half their sway had lost,
Whelm'd in the pressure of the present woe.

Nor longer now the costly rites prevail'd
Of ancient burial, erst punctilious kept:
For all rov'd restless, with distracted mind,

Quem averà que sem o ver o creia?
Que tam disformemente ali lhe incharam,
As gingivas na boca que crecia
A carne, e juntamente apodrecia.
Apodrecia com fetido e bruto
Cheiro, que àrvizinho inficionava,
Nam *tinhamos ali medico astuto*,
Sururgiàm sutil menos se achava:
Mas qualquer neste officio poco instruto
Pella carne jà podre assi cortava,
Como se fora morta, e bem convinha
Pois que morto ficava a quem a tinha.
Emfin nesta incognita espessura
Deixamos pera sempre os companheiros,
Que em tal caminho ed em tanta desventura
Foram sempre com nosco aventureiros:
Quam facil he ao corpo a sepultura
Quaisquer ondas do mar quaisquer onteiros,
Estranho, assi mesmo como aos nossos,
Receberam de todo o illustre os ossos.

Cant. V. 81.

A dread disease its rankling horrors shed,
And Death's dire ravage through my army spread.
Never my eyes such dreary sight beheld;
Ghastly the mouth, and gums enormous swell'd;
And, instant, putrid, like a dead man's wound,
Poison'd with fetid steams the air around.
No sage physician's ever-watchful zeal,
No skilful surgeon's gentle hand to heal
Were found: each dreary mournful hour we gave
Some brave companion to a foreign grave:
A grave, the awful gift of every shore!
Alas! what weary toils with us they bore!
Long, long endear'd by fellowship in woe,
O'er their cold dust we give the tears to flow;
And in their hapless lot forbode our own,
A foreign burial, and a grave unknown.

Mickle.

Ver. 1326. *At length the temples of the Gods themselves,*

Chang'd into charnels,——] Thucydides expressly declares, that such was the throng of people from the country, that the magistrates, not being able to accommodate them elsewhere, ordered the doors of the different temples to be thrown open for their reception. Here the unhappy crowds pressed together, and here they soon sunk, the dying over the dead, till, in his own expressive language, τα τε ἱερα, ἐν οἷς ἐσκήνητο, νεκρων πλεα ἦν, αὐτου παντοδαπου ἐσοντος, "these holy places were filled with the corses of those who expired within them." He also adds, that religion had now relinquished all its influence, and that it was impossible to comply with the splendour and piety of their accustomed funerals.

Quisque suum pro re consortem mœstus humabat.

Multaque vi subitâ paupertas horrida suasit: 1280
Namque suos consanguineos aliena rogorum
Insuper exstructa ingenti clamore locabant,
Subdebantque faces; multo cum sanguine sæpe
Rixantes potius, quam corpora desererentur.

Ver. 1336. *And direst exigence impeli'd them, oft,*
Headlong, to deeds most impious;——] I copy the reading of Mr. Wakefield, as by far the most correct and energetic, v. 1280:

Multaque vi subitâ paupertas horrida suasit.

In the common editions it occurs thus:

Multaque *vis subita*, &c.

Ver. 1337. *Headlong, to deeds most impious; for the pyres*
Funereal seiz'd they, rear'd not by themselves,] With this most nefarious sacrilege the dreadful picture closes: and the climax is well preserved, for nothing could possibly exceed the horror which the perpetration of such an action must have excited in the minds both of the victors and the vanquished, the former of whom, we may readily conceive, could only have been stimulated to this pious theft from motives of religion and domestic affection. And we cannot but be strongly reminded, in this place, of the following passage in Young's Night Thoughts:

What could I do? what succour? what resource?
With pious sacrilege, a grave I stole;
With impious piety, that grave I wrong'd.

I have already observed, that the Athenians were more ceremonious than any other people in relation to the funerals of their dead. It was universally believed among them, that a curse would attend the whole life of that man who should dare to neglect this sacred and supreme duty, when devolved upon him by the decease of his relations or friends. Their funerals, as I have already observed in the Note on Book III. v. 923. were often accompanied with the most extravagant pomp: a pomp which, at one period, was carried to such an extreme, that Solon was compelled to draw up and enforce a law for its moderation. In the commencement of the pestilence before us, there can be no doubt that the ceremonies of burial were conducted with its accustomed pageantry. As the mortality increased, however, we learn from Thucydides, as well as the present history, that public graves were dug in the vicinity of the city, and the ceremonial was attended upon, and hurried over

From scene to scene; and worn with grief and toil
Gave to their friends th' interment chance allow'd.
And direst exigence impell'd them, oft,
Headlong, to deeds most impious; for the pyres
Funereal seiz'd they, rear'd not by themselves,
And with loud dirge, and wailing wild, o'er these
Plac'd their own dead; amid th' unhallow'd blaze
With blood contending, rather than resign
The tomb thus gain'd, or quit th' enkindling corse.

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with as much speed as possible by apparitors hired for the purpose. At length, as we are farther told, these wretched hirelings were either destroyed by their dangerous occupation, or relinquished it from a fear of destruction, or in consequence of their having completely filled the public graves appointed by the magistrates of the city. The funeral rites of the deceased now, therefore, depended upon their surviving friends alone; and, too much depressed by grief, or exhausted by disease, to dig a grave or raise a pyre with their own hands, in the extremity of despair, they often endeavoured to seize, by force, the pyres which were erected for strangers.

Ver. 1339. *And with loud dirge, and wailing wild,—*] In the original, ver. 1282:

Insuper exstructa *ingenti clamore* locabant.

So, Gray, in terms equally bold and animated:

With screaming Horror's funeral cry,
Despair, and fell Disease.

Hymn to Adversity.

The "*vehement vociferation*," referred to in the text, is, by many annotators, attributed to their contention for the funeral pile: yet it rather refers, I think, to those violent outcries and lamentations which were uniformly poured forth by the common people over their deceased friends during these superstitious solemnities; and were often accompanied with extravagant gesticulations and voluntary tortures.—The dirges, or funeral orations, delivered over the tombs or pyres of the more opulent, were, in general, as I have already observed in the Note on Book III. ver. 923. precomposed, and highly beautiful. Our author himself has furnished us, in this passage in the third Book, with a specimen which has never been exceeded. Nardius has written a treatise of some length upon this very specimen; in which, with much truth and erudition, he has developed the entire history of funeral solemnities as practised among the Athenians. Those, who are anxious for fuller information upon this interesting subject, may peruse him with an equal degree of amusement and satisfaction.

GENERAL INDEX

OF

PERSONS, PLACES, AND THINGS.

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☞ *The* Numerals *point out the* Volume : *the* Figures, *the* Page.

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